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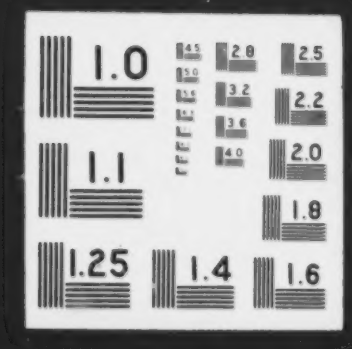

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ARKANSAS-RED RIVER BASINS WATER QUALITY CONSERVATION. APPENDIX VOLUME III. WATER QUALITY DATA

Public Health Service
Washington, D. C.

June 1964

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Arkansas-Red River Basins

WATER QUALITY CONSERVATION

APPENDIX

VOLUME III · WATER QUALITY DATA

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Arkansas-Red River Basins

WATER QUALITY CONSERVATION

APPENDIX

VOLUME III - WATER QUALITY DATA

Monthly Summary of Continuous Recorded Flow and Quality Data
Daily Flow and Continuous Recorded Quality Data
Chemical Analyses of Natural Brine Sources

U.S. DEPARTMENT OF HEALTH, EDUCATION, AND WELFARE
Public Health Service
Division of Water Supply and Pollution Control
Washington, D.C. 20201
June 1964

I

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INTRODUCTION

The compilation of water quality data collected during the 27-month period of intensive study (July 1960 through September 1962) of the Arkansas-Red River Basins, Water Quality Conservation Project is summarized in this part. These data were gathered to provide a basis for (1) location and definition of the significant natural and manmade sources of salt (mineral) pollution, and (2) determination of the effects of these sources on the quality of water in the receiving streams. The intensive investigation of water quality and natural sources of mineral pollution was limited to the central portions of both basins, the area in which major salt sources exist, and mineral pollution is most severe.

Stream quality monitoring consisted of continuous specific conductance recording combined with continuous flow measurement (flow gaging was carried out by U.S. Geological Survey and U.S. Army Corps of Engineers). Weekly grab samples were collected and analyzed to provide a basis for correlation of specific conductance with dissolved solids, chlorides, and sulfate concentration.

Stream uniformity analyses were run to corroborate the applicability of the continuous record of specific conductance or to provide a guide for adjustment of sampling points within the stream cross section.

Volume III is arranged as follows:

Monthly Summary of Continuous Recorded Flow and Quality Data.
Daily Flow and Continuous Recorded Quality Data.
Chemical Analyses of Natural Brines Sources.
Index to Tabulations.

The first year of stream monitoring included 64 stations, and 55 during the second year. These stations are located as shown on Figure 1. The Public Health Service is continuing the operation of a surveillance monitoring network at 36 stations and is continuing other special field studies related to this problem.

Explanation of Tabulations

General

Data tabulations are arranged according to basin in upstream order. The downstream station on the main stem is first, followed by the next upstream station. Where a tributary enters between two main stem stations, all of its stations in a upstream order are shown between the two main stream stations.

The following general identification is provided for each tabulation of data except the chemical analyses of natural brine sources.

Public Health Service Station Number (No.): This number was assigned to identify each monitoring station location. (See the "Monthly Summaries of Continuous Recorded Flow and Quality Data" for U.S. Geological Survey - USGS-Station Number when applicable.)

Location: Designates the stream monitored and the general location of the station with respect to the nearest community. The geodetic description of the station is presented in the "Monthly Summary of Continuous Recorded Flow and Quality Data".

Basin: Indicates the major basin in which the water quality monitoring station is located.

Tributary to: Indentifies the stream to which the monitored stream is tributary, when the watercourse being monitored is other than the Arkansas or Red Rivers.

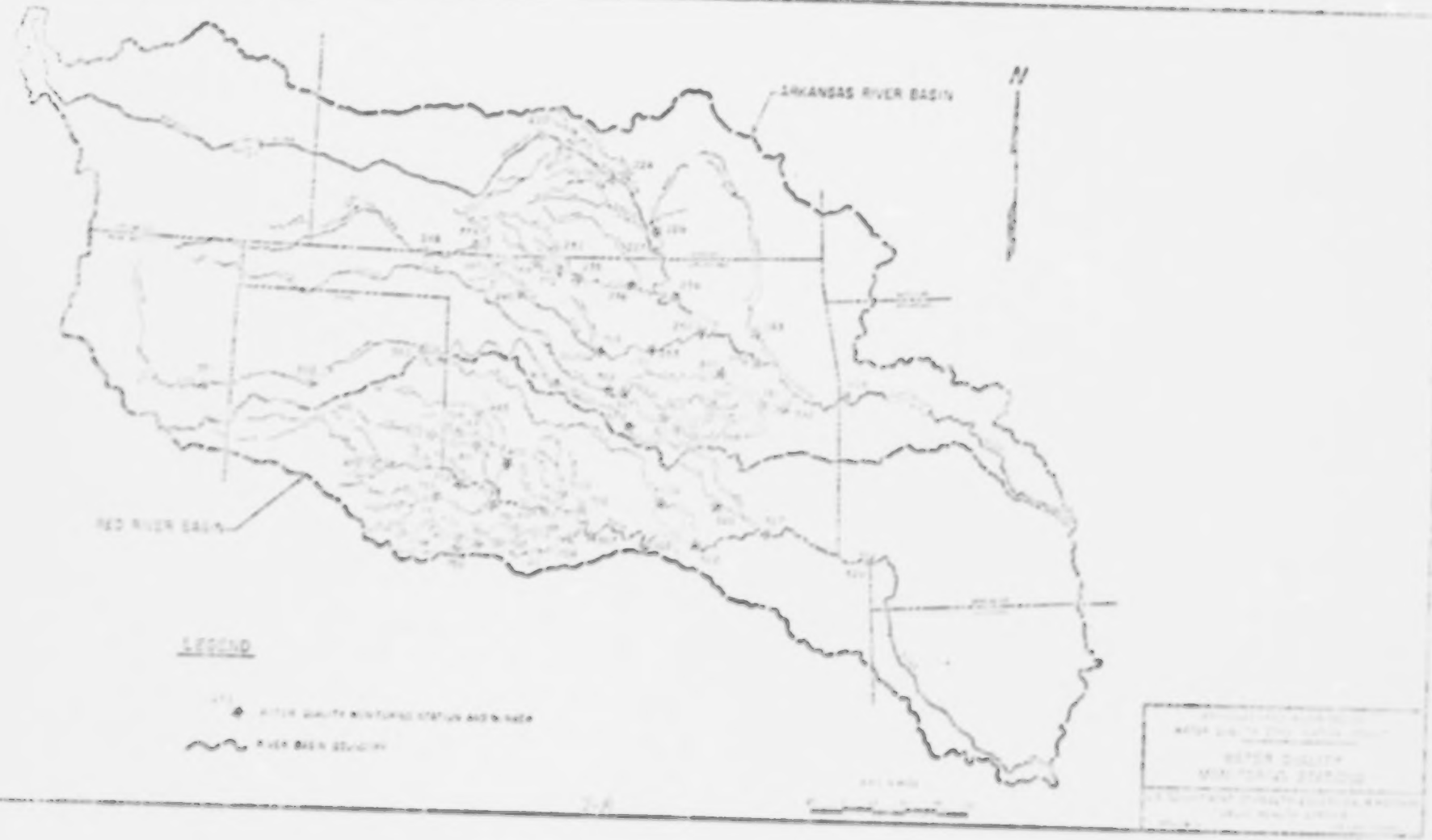
All data computations were made by the Statistical Services Section, Sanitary Engineering Center, U.S. Public Health Service, Cincinnati, Ohio, using a Honeywell 400 computer. All programming and related work were done by personnel of the Statistical Services Section, with the aid of Project personnel and personnel of the Field Operations Section, Technical Services Branch, Water Supply and Pollution Control Division, Cincinnati, Ohio.

All chemical analyses, unless otherwise noted, were carried out in accordance with procedures set forth in "Standard Methods for the Examination of Water and Wastewater," 11th edition, 1960, American Public Health Association, New York 19, New York, except sulfate determinations in the Public Health Service laboratories, where a modified turbidimetric procedure was used to improve accuracy.

Monthly Summary of Continuous Recorded Flow and Quality Data

This tabulation summarizes the two basic measurements, continuous specific conductance and continuous streamflow. The bases for this tabulation are the "Daily Flow and Continuous Recorded Quality Data" which follow the summary tabulations.

Correlations between conductance and concentration of chlorides, sulfates, and dissolved solids, were determined for each station from analyses of weekly grab samples collected during the study. These individual correlations were used to compute constituent concentrations. The correlation equations are shown


ARKANSAS RIVER BASIN
N
RED RIVER BASIN
LEGEND

for each tabulation. Flow measurements were then used to translate concentrations in mg/l to load in tons per day.

Also presented as a part of this tabulation is a summary of main stream flow data consisting of mean annual flow for the period of record and the range of annual flows, in cubic feet per second (cfs), together with an indication of the period of flow record (in years).

"Remarks" are comments on conditions during the period of intensive study.

All tabulations indicate zero (0) when the measurement was zero and a dash (-) when no data were obtained.

All flow data included in this compilation are provisional data furnished by the U.S. District Office of the Surface Water Branch of the U.S. Geological Survey in Arkansas, Kansas, New Mexico, Oklahoma, and Texas. The maximum and minimum of the daily means are shown for each month and for the entire year. Complete flow measurements are shown in this part including periods when no specific conductance was measured.

Weighted Mean (Wt. Mean) - This value in mg/l of the mineral constituent for any period (day, month, or year) is the total weight of the constituent divided by total volume of flow for the period of measurement. The specific conductance, as measured continuously, was weighted similarly for any period. The concentration of each constituent was computed from the specific conductance, using correlation equations derived from laboratory analyses of weekly grab samples.

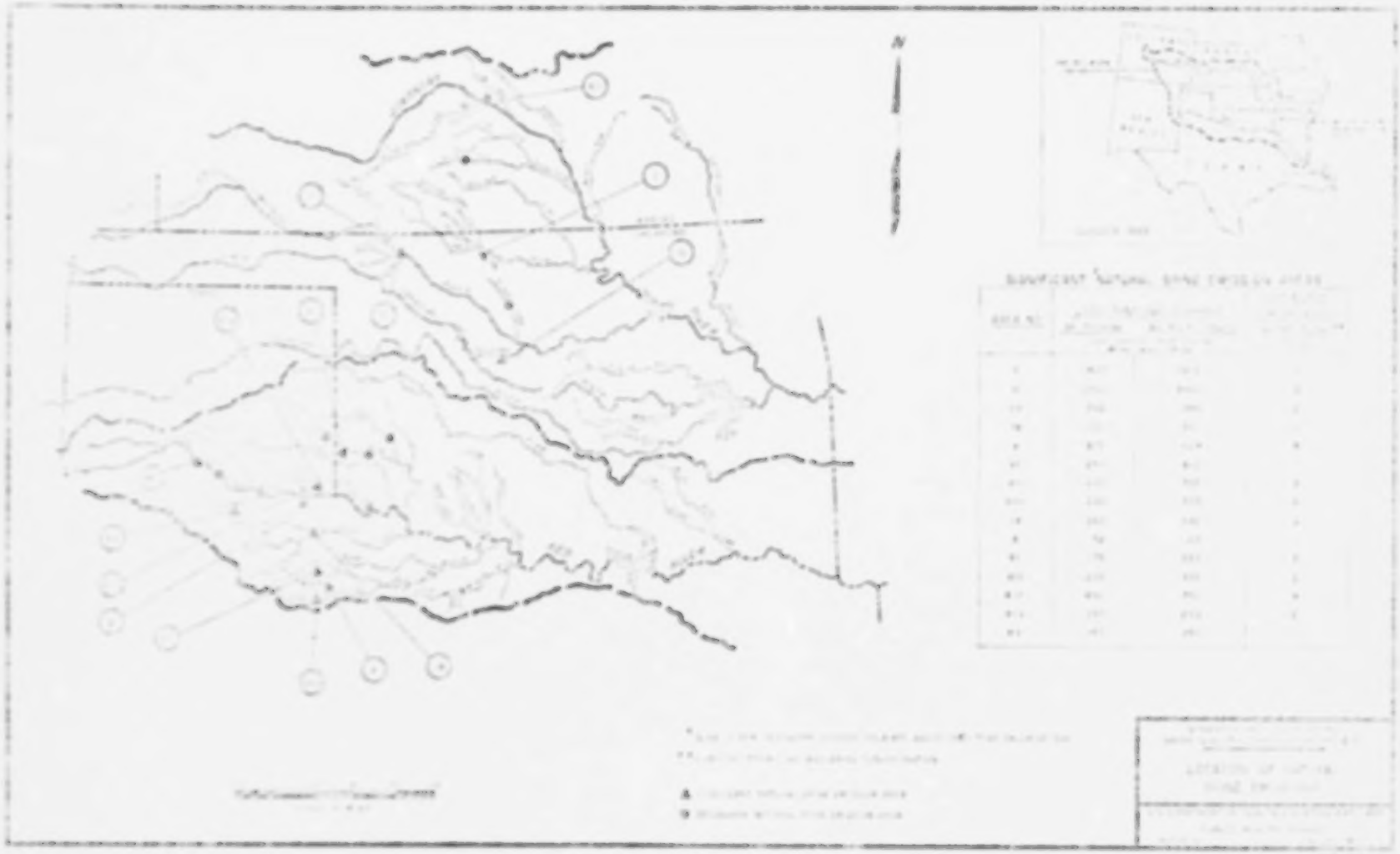
The tabulation shows the highest and lowest of the daily means of specific conductance recorded and concentration computed during each month and the water year. Instantaneous maximum and minimum of each constituent for the water year are shown under "Remarks". A zero daily mean concentration (and load) representing a zero daily flow was not considered in selection of the monthly and annual minimum daily means. Zero daily flows are shown, however.

When continuous specific conductance measurements were not obtained for a significant portion of the total streamflow in a water year, an engineering review was made of the nonmeasured periods and reasonable quality estimates assigned to all or a portion of the flow. Flow rates, flow patterns, continuous recorder qualities before and after the no-record period, similarity of flows and patterns to measured periods, and results of grab samples were used to select reasonable estimates of quality for periods up to several weeks.

Chemical Analyses of Natural Brine Sources

This is a tabulation of the results of chemical analyses of grab samples collected at the various natural brine sources described in Volume I of this Appendix and located as shown on Figure 2.

Each tabulation is identified as to Area Location, Area No. as designated on maps and charts, Collection Point, Basin (River) in which the brine source is located, and tributary to which the source emits. RATSEC designates the Robert A. Taft Sanitary Engineering Center, and USGS designates the U.S. Geological Survey.



MONTHLY SUMMARY OF CONTINUOUS RECORDED FLOW AND QUALITY DATA

MONTHLY SUMMARY OF CONTINUOUS RECORDED FLOW AND QUALITY DATA

River Basin: Arkansas Station Numbers: PHS: 403 USGS: 2505.00

Stream and Location: Arkansas River at Van Buren, Arkansas
Lat. 35°25'42", long. 94°21'37", Sec. 36,T.9 N.,R.32 W., at bridge on U. S. Hwy 64 at Van Buren, Crawford County, Arkansas, and at river mile 353.4.

Equations Used to Compute Concentrations From Specific Conductance

	Number Samples	Equations	Std. Error	Correl. Coeff.
Dissolved Solids:	25	DS = 0.6394 Sp. C.	107	0.9580
Chlorides:	127	Cl = 0.26846 Sp. C.-52	19	0.9830
Sulfates:	125	SO_4 = 0.0950 Sp. C.	19	0.9707

Main Stream Flow: 32,250 cfs; Range: 3474 - 62940 CFS Years: 35

Remarks: Records good. Occasional minor stratification. Instantaneous conductivity range 220-2450 micromhos. The flow recurrence intervals for water years 1961 and 1962 are 3.34 and 2.26 respectively.

NOTES:

Year	Month	Number of Days of Specific Conductance Record	STREAM FLOW Cubic Feet/Second Mean	Extremes Max. Day	Extremes Min. Day	SPECIFIC CONDUCTANCE Micromhos/Centimeter @ 25° C Wt. Mean	Extremes Max. Day	Extremes Min. Day	CHLORIDES (Cl) Milligrams/Liter Wt. Mean	Extremes Max. Day	Extremes Min. Day	CHLORIDES (Cl) Tons/Day Wt. Mean	Extremes Max. Day	Extremes Min. Day	SULFATES (SO_4) Milligrams/Liter Wt. Mean	Extremes Max. Day	Extremes Min. Day	SULFATES (SO_4) Tons/Day Wt. Mean	Extremes Max. Day	Extremes Min. Day	DISSOLVED SOLIDS (103° C) Milligrams/Liter Wt. Mean	Extremes Max. Day	Extremes Min. Day	DISSOLVED SOLIDS (103° C) Tons/Day Wt. Mean	Extremes Max. Day	Extremes Min. Day
1960	July	24.2	38500	120000	9100	668	1610	274	136	409	34	16100	37100	6980	64	153	26	7520	14200	3300	427	1030	175	50600	95200	22200
	Aug.	19.6	23600	66400	10700	845	1430	350	172	352	48	11900	34100	3940	80	136	33	5550	15100	2130	540	915	224	37300	101000	14300
	Sept	30.0	15300	57300	5530	790	1630	465	157	418	72	6460	11300	3340	75	155	44	3080	6890	1500	505	1040	297	20700	46300	10100
	SUMMARY	73.8	25800	120000	5530	765	1630	274	155	418	34	11100	37100	3340	73	155	26	5190	15100	1500	489	1040	175	34900	101000	10100
1960	Oct.	31.0	11430	25300	4820	1200	1670	885	270	397	186	8320	21100	2930	114	159	84	3510	8610	1310	767	1070	565	23630	58680	8820
	Nov.	30.0	18580	43700	4990	851	1700	528	176	403	90	8810	31050	4140	81	161	50	4050	13060	1750	544	1080	337	27230	88240	11500
	Dec.	31.0	20460	45300	5510	781	1800	441	158	430	67	8710	20760	4500	74	171	42	4080	7380	1590	499	1150	282	27510	49370	10720
1961	Jan.	31.0	9620	15500	4430	1205	1650	1040	271	391	227	7030	9490	3020	114	158	98	2960	4120	1320	770	1060	665	19960	26670	8880
	Feb.	28.0	13500	34800	5500	1020	1990	650	222	482	123	8080	11560	3920	97	189	61	3530	5830	1660	652	1270	416	23720	39090	11170
	Mar.	31.0	29700	110000	12030	777	1100	526	157	242	89	12570	26390	6080	74	104	50	5920	15490	2760	497	720	336	39780	99620	18630
	Apr.	30.0	47580	110000	25600	672	913	441	128	193	67	16410	29290	11890	64	87	42	8210	15500	5470	430	580	282	55140	104760	36900
	May	31.0	159850	280800	25880	358	793	288	44	160	25	18960	36000	11250	34	75	27	14650	26450	5250	229	507	184	98660	176340	35420
	June	30.0	52240	130000	12800	556	1160	270	97	258	20	13660	29990	6070	53	110	26	7460	14280	2840	355	742	173	50120	96690	19000
	July	31.0	56110	140500	11950	419	1130	236	60	251	11	9070	21250	5970	40	107	22	6050	11940	2710	268	720	151	40330	80240	18230
	Aug.	31.0	30680	87400	8930	599	1190	350	109	265	41	9010	22690	3690	57	113	33	4710	9570	1740	383	760	224	31670	64420	11760
	Sept	30.0	71450	173420	11750	437	1390	250	65	320	15	12520	45420	7420	42	132	24	8090	24820	3200	279	886	160	53730	165750	21610
	SUMMARY	365.0	43430	280800	4430	545	1990	236	94	482	11	11050	45420	2930	52	189	22	6120	26450	1310	348	1270	151	40900	176340	8820
1961	Oct.	31.0	46840	110300	15060	479	789	355	76	159	43	9720	36330	5670	46	75	34	5810	18170	2810	306	504	227	38630	123290	18780
	Nov.	30.0	75140	154750	18380	471	859	308	75	178	30	14980	49440	7660	45	82	29	9110	24350	3770	301	549	197	60950	162840	25570
	Dec.	30.0	49830	74400	29030	577	835	481	103	172	43	13830	19300	10360	55	79	46	7380	10450	5530	369	534	307	49690	70750	36910
1962	Jan.	31.0	27320	39600	20130	767	1050	512	154	228	30	11340	19030	5910	72	99	49	5370	8660	3230	490	668	327	36070	58580	21630
	Feb.	28.0	35010	50100	25500	847	1360	610	175	313	112	16510	25420	12440	80	129	58	7550	11400	5800	542	870	390	51140	77200	39060
	Mar.	31.0	29230	71050	10480	672	1400	473	128	322	75	10080	15540	8600	64	133	45	5040	9000	3570	430	895	302	33870	60800	23970
	Apr.	30.0	33870	78460	17730	605	1010	411	110	218	58	10040	15250	6580	57	96	39	5210	9740	3260	387	645	263	35320	64810	21930
	May	31.0	10820	30450	4220	999	1750	615	215	418	113	6302	11180	3220	95	167	58	2770	5390	1340	639	1120	393	18640	36500	9120
	June	30.0	41850	117670	4940	808	1720	487	165	408	79	18610	70850	4890	77	163	46	8680	30800	1940	517	1100	311	58310	208090	13060
	July	31.0	18350	28650	10300	902	2150	443	190	525	67	9400	21050	4970	86	204	42	4250	8180	2510	577	1370	283	28540	55140	17000
	Aug.	31.0	11560	26930	3630	1170	1640	578	261	388	103	8130	28210	2040	111	156	55	3460	11340	930	747	1050	369	23240	76120	6280
	Sept	30.0	30830	66750	5520	600	1210	362	109	272	45	9060	32530	2950	57	114	34	4740	13750	1310	384	770	231	31900	92090	8870
	SUMMARY	365.0	34220	154750	3630	658	2150	308	125	525	30	11480	70850	2040	63	204	29	5790	30800	930	421	1370	197	38680	208090	6280

MONTHLY SUMMARY OF CONTINUOUS RECORDED FLOW AND QUALITY DATA

River Basin: Arkansas Station Numbers: PHS: 392 USGS: 2450.00

Stream and Location: Canadian River near Whitefield, Oklahoma
Lat. 35°16', long. 95°14', SE-1/4 SE-1/4, Sec. 12, T.9 N., R.19 E.,
at bridge on State Hwy 9, 3/4 miles northeast of Whitefield,
Haskell County, Okla., and at river mile 18.8.

Main Stream Flow: 6170 cfs; Range: 980-14210 cfs; Years: 24

NOTES:

Equations Used to Compute Concentrations From Specific Conductance

	Number Samples	Equations	Std. Error	Correl. Coeff.
Dissolved Solids:	24	TDS = 0.5953 Sp. C.	54.	0.9769
Chlorides:	128	Log Cl = 1.1929 Log Sp. C. - 1.2512	0.0505	0.9774
Sulfates:	128	SO_4 = 0.0826 Sp. C.	31.	0.6835

Remarks: Records good. Occasional minor stratification. Instantaneous conductivity range 50-1900 micromhos. The flow recurrence intervals for water years 1961 and 1962 are 1.65 and 1.92 respectively.

Year	Month	Number of Days of Specific Conductance Record	STREAM FLOW Cubic Feet/Second			SPECIFIC CONDUCTANCE Micromhos/Centimeter @ 25° C			CHLORIDES (Cl) Milligrams/Liter				Tons/Day			SULFATES (SO_4) Milligrams/Liter				Tons/Day			DISSOLVED SOLIDS (103° C) Milligrams/Liter				Tons/Day		
				Extremes			Extremes			Extremes			Extremes				Extremes			Extremes				Extremes			Extremes		
			Mean	Max. Day	Min. Day	Wt. Mean	Max. Day	Min. Day	Wt. Mean	Max. Day	Min. Day	Wt. Mean	Max. Day	Min. Day	Wt. Mean	Max. Day	Min. Day	Wt. Mean	Max. Day	Min. Day	Wt. Mean	Max. Day	Min. Day	Wt. Mean	Max. Day	Min. Day	Wt. Mean	Max. Day	Min. Day
1960	July	31.0	9320	31100	657	739	1700	324	155	401	55	3890	14000	611	61	141	27	1540	5160	220	440	1010	193	11300	37000	1580			
	Aug.	31.0	3650	10200	1000	883	1410	498	185	321	93	1820	5240	456	73	117	41	720	1990	188	525	840	296	5160	14200	1350			
	Sept	26.5	706	1700	325	1190	1760	825	263	419	169	454	977	303	99	146	69	170	381	109	707	1050	491	1220	2730	783			
SUMMARY		88.5	4560	31100	325	802	1760	324	169	419	55	2140	14000	303	67	146	27	843	5160	109	477	1050	193	6040	37000	783			
1960	Oct.	31.0	3560	11130	379	1010	1580	604	214	367	117	2050	7930	348	83	131	50	796	2990	126	599	940	359	5742	21400	903			
	Nov.	30.0	1580	6560	694	953	1380	767	202	312	155	857	2790	546	79	115	64	337	1140	205	567	821	457	2420	8200	1470			
	Dec.	31.0	3340	16100	630	711	1430	381	141	325	67	1270	4000	529	59	119	32	530	1780	194	423	950	227	3800	12760	1390			
1961	Jan.	31.0	1990	6850	721	1180	1740	813	234	411	166	1250	3070	706	90	144	68	476	1250	253	642	1030	484	3440	8920	1810			
	Feb.	28.0	2440	5270	899	1140	1780	812	248	423	166	1630	3230	926	95	148	67	619	1190	329	676	1060	483	4450	8540	2360			
	Mar.	31.0	5980	48130	1210	673	1210	415	133	266	74	2140	9680	871	56	100	34	903	4420	328	401	719	247	6460	32490	2350			
	Apr.	30.0	5600	30750	1110	776	1410	400	157	319	71	2370	5910	955	64	117	33	965	2740	349	462	836	238	6970	19760	2500			
	May	31.0	8590	40250	955	547	1540	351	105	356	61	2410	8690	848	45	128	29	1040	3970	309	326	917	209	7546	28430	2214			
	June	30.0	4210	10100	1660	816	1260	532	168	280	100	1900	4920	733	68	105	44	761	1970	305	485	750	317	5520	14110	2190			
	July	31.0	8210	32380	773	488	1090	300	90	235	51	1990	8960	488	40	90	25	885	3640	187	291	646	178	6420	26110	1340			
	Aug.	31.0	1740	6980	617	889	1260	500	185	280	93	870	3720	373	73	104	42	343	1470	144	529	749	298	2380	10650	1030			
	Sept	30.0	5060	26650	645	646	1670	500	126	392	93	1720	7200	414	53	138	42	723	3170	159	385	992	298	5250	22890	1140			
SUMMARY		365.0	4360	48130	379	716	1780	300	143	423	51	1687	9680	348	59	148	25	696	4420	126	426	1060	178	5024	32490	903			
1961	Oct.	31.0	3360	9960	911	707	1100	493	140	238	91	1270	3340	578	59	91	41	525	1400	223	421	655	293	3810	10060	1600			
	Nov.	30.0	7730	36030	824	564	1100	370	107	238	65	2230	7260	529	47	91	31	980	3350	203	335	654	220	7000	24040	1450			
	Dec.	31.0	5840	12900	2500	686	1160	400	137	254	71	2140	5550	1490	57	96	33	896	2260	643	408	690	238	6430	16200	4610			
1962	Jan.	31.0	2870	7050	1340	997	1470	372	212	337	65	1640	2510	1030	83	122	31	635	971	405	593	875	221	4590	6960	2900			
	Feb.	28.0	2360	5930	1330	1090	1600	540	237	373	102	1510	2350	1220	90	132	45	572	876	448	651	952	321	4140	6280	3220			
	Mar.	31.0	5470	18210	931	719	1450	415	143	331	74	2110	4430	831	59	120	34	868	2220	302	428	863	247	6300	15930	2170			
	Apr.	30.0	8940	42270	2040	381	856	229	67	177	37	1610	5680	715	32	71	19	747	2770	317	227	509	136	5470	19870	2280			
	May	31.0	1850	7810	457	1010	1680	685	215	396	135	1070	3280	476	83	140	57	414	1350	169	601	1000	408	3000	9760	1210			
	June	30.0	9270	34030	3400	491	1010	200	90	215	31	2270	7050	690	40	83	17	1025	3230	367	292	601	119	7300	23120	2630			
	July	31.0	3440	15970	627	536	1180	219	101	259	35	940	2140	326	44	98	18	407	888	129	319	702	130	2950	6360	925			
	Aug.	31.0	1540	11940	158	1320	1750	607	295	415	117	1220	8980	169	109	145	50	453	3340	60	782	1040	361	3250	23950	429			
	Sept	30.0	3520	7610	481	590	983	400	114	209	71	1070	2250	178	49	82	33	464	974	78	351	585	238	3330	6980	557			
SUMMARY		365.0	4680	42270	158	640	1750	200	125	415	31	1570	8980	169	53	145	17	667	3350	60	381	1040	119	4798	24040	429			

MONTHLY SUMMARY OF CONTINUOUS RECORDED FLOW AND QUALITY DATA

River Basin: Arkansas Station Numbers: PHS: 761 USGS: 2445.00

Stream and Location: North Canadian River near Eufaula, Oklahoma.
Lat. 35°19'00", long. 95°34'20", in NE¼, Sec. 26, T.10 N., R.16 E.,
2 mi. north of Eufaula, McIntosh County, Okla., and at river mile 6.9.

Equations Used to Compute Concentrations From Specific Conductance

	Number Samples	Equations	Std. Error	Correl. Coeff.
Dissolved Solids:	26	TDS = 0.5931 Sp.C.	89	0.9688
Chlorides:	129	Log Cl = 1.2314 log Sp.C.-1.3383	0.0441	0.9855
Sulfates:	51	SO_4 = 0.0401 Sp.C. + 10	12	0.7960

Main Stream Flow: 1861 cfs; Range: 1750-1970 cfs Years: 2

Remarks: Records good. Frequent minor stratification. Instantaneous conductivity range 90-3000 micromhos. The flow recurrence intervals for water years 1961 and 1962 are 1.33 and 4.0, respectively.

NOTES:

		Number of Days of Specific Conductance Record	STREAM FLOW Cubic Feet/Second			SPECIFIC CONDUCTANCE Micromhos/Centimeter @ 25° C			CHLORIDES (Cl) Milligrams/Liter			CHLORIDES (Cl) Tons/Day			SULFATES (SO_4) Milligrams/Liter			SULFATES (SO_4) Tons/Day			DISSOLVED SOLIDS (103° C) Milligrams/Liter			DISSOLVED SOLIDS (103° C) Tons/Day		
				Extremes			Extremes			Extremes			Extremes			Extremes			Extremes			Extremes			Extremes	
Year	Month		Mean	Max. Day	Min. Day	Wt. Mean	Max. Day	Min. Day	Wt. Mean	Max. Day	Min. Day	Wt. Mean	Max. Day	Min. Day	Wt. Mean	Max. Day	Min. Day	Wt. Mean	Max. Day	Min. Day	Wt. Mean	Max. Day	Min. Day	Wt. Mean	Max. Day	Min. Day
1960	July																								
	Aug.																								
	Sept	23.7	263	595	171	1370	2150	904	337	581	200	253	362	187	74	116	49	56	86	40	813	1280	536	612	947	441
SUMMARY		24.0	263	595	171	1390	2150	904	342	581	200	253	362	187	75	116	49	56	86	40	826	1280	536	612	947	441
1960	Oct.	31.0	481	1800	126	1380	2310	662	336	636	138	436	1380	148	65	93	36	84	298	31	815	1370	393	1060	3280	342
	Nov.	30.0	730	2270	344	983	1220	810	322	288	175	437	1550	225	49	59	44	96	362	54	583	722	480	1150	3970	591
	Dec.	31.0	936	2590	317	958	1490	714	216	370	150	542	1090	222	48	70	39	121	269	52	568	883	424	1430	2950	571
1961	Jan.	31.0	558	1220	301	1350	1840	717	330	480	150	496	1320	279	64	84	39	96	282	67	801	1090	425	1200	3100	738
	Feb.	28.0	804	1660	331	1219	1790	895	290	464	198	628	1270	366	59	82	47	128	260	59	723	1060	530	1565	3190	866
	Mar.	31.0	1570	11100	491	789	1330	176	169	322	27	716	1710	394	43	63	17	178	436	89	468	790	104	1980	4780	981
	Apr.	30.0	2180	7830	500	748	1750	206	159	450	33	934	1850	572	40	80	18	235	444	125	444	1037	122	2610	6880	1690
	May	31.0	3520	11430	357	648	1775	440	133	455	82	1260	3750	395	35	81	28	342	998	84	384	1062	261	3650	10950	925
	June	30.0	2150	4470	829	715	1150	480	150	269	92	868	1660	451	39	56	29	226	428	113	424	683	285	2450	4700	1240
	July	31.0	5020	15320	378	395	1140	259	72	264	44	975	4120	252	26	56	20	352	1120	60	234	673	153	3170	12330	657
	Aug.	31.0	880	3380	389	825	1270	379	179	305	69	425	2120	193	44	61	25	102	480	52	488	755	225	1160	5280	569
	Sept	30.0	2330	7460	55	587	2170	420	118	590	78	740	2860	210	33	97	27	207	739	54	348	1290	249	2180	8120	670
SUMMARY		365.0	1760	15320	55	694	2310	176	145	636	27	692	4120	148	38	97	17	181	1120	31	412	1370	104	1970	12330	342
1961	Oct.	31.0	1240	2300	498	952	1320	590	214	318	119	714	1740	295	48	63	34	160	392	73	564	781	350	1880	4310	801
	Nov.	30.0	3090	10890	1120	666	1220	374	138	289	68	1151	2130	571	36	59	25	308	629	141	395	722	222	3290	6910	1550
	Dec.	31.0	2820	7520	1230	887	1270	547	197	305	108	1490	3970	806	46	61	32	350	972	190	526	755	324	4000	10670	2080
1962	Jan.	31.0	979	1500	623	1480	1700	1200	366	435	283	968	1400	667	69	78	58	182	309	144	876	1010	710	2310	3390	1580
	Feb.	28.0	810	1040	619	1610	1820	1490	408	472	368	893	1170	691	75	84	70	164	248	148	957	1080	881	2090	2720	1630
	Mar.	31.0	2160	6360	471	905	1660	572	201	417	115	1170	2570	530	46	76	34	267	610	113	537	975	339	3020	6700	1240
	Apr.	30.0	3330	14870	756	673	1400	363	139	342	65	1250	3030	651	36	66	25	332	887	146	399	830	215	3580	9740	1600
	May	31.0	852	3170	245	1170	2260	758	276	617	161	633	1670	310	57	101	41	131	410	65	696	1340	449	1600	4500	708
	June	30.0	4240	12140	1330	634	1490	452	129	371	85	1480	4120	702	34	70	28	400	1100	183	376	885	268	4300	12030	2010
	July	31.0	1700	4350	573	668	1290	379	138	309	69	632	1250	288	36	62	25	170	338	76	396	762	225	1820	3710	832
	Aug.	31.0	252	723	73	1080	1810	460	249	471	93	169	299	91	53	83	28	36	75	19	640	1080	273	434	819	209
	Sept	30.0	2170	5650	199	508	1290	340	99	310	61	578	1250	158	31	62	23	175	348	37	301	764	201	1760	3800	409
SUMMARY		365.0	1970	14870	73	799	2260	340	172	617	61	911	4120	91	42	101	23	222	1100	19	476	1340	201	2511	12030	209

MONTHLY SUMMARY OF CONTINUOUS RECORDED FLOW AND QUALITY DATA

River Basin: Arkansas Station Numbers: PHS: 390 USGS: 2435.00

Stream and Location: Deep Fork River near Beggs, Oklahoma
Lat. 35°41', long. 96°04', on line between Sec. 19 & 20, T.14 N., R.12 E., at bridge on Country Road 4 mi. south of Beggs, Okmulgee County, Oklahoma and at river mile 85.

Equations Used to Compute Concentrations From Specific Conductance

	Number Samples	Equations	Std. Error	Correl. Coeff.
Dissolved Solids:	24	TDS = 0.5796 Sp. C.	40	0.9840
Chlorides:	137	Cl = 0.2205 Sp. C.	29	0.9620
Sulfates:	95	SO_4 = 0.0200 Sp. C. + 17	9	0.6275

Main Stream Flow: 910 cfs; Range: 114-2450 Years: 24

Remarks: Records very good. Occasional minor stratification. Instantaneous conductivity range 40-5200 micromhos. The flow recurrence intervals for water years 1961 and 1962 are 1.78 and 209, respectively.

NOTES:

Year	Month	Number of Days of Specific Conductance Record	STREAM FLOW Cubic Feet/Second Mean	Extremes Max. Day	Extremes Min. Day	SPECIFIC CONDUCTANCE Micromhos/Centimeter @ 25° C Wt. Mean	Extremes Max. Day	Extremes Min. Day	CHLORIDES (Cl) Milligrams/Liter Wt. Mean	Extremes Max. Day	Extremes Min. Day	CHLORIDES (Cl) Tons/Day Wt. Mean	Extremes Max. Day	Extremes Min. Day	SULFATES (SO_4) Milligrams/Liter Wt. Mean	Extremes Max. Day	Extremes Min. Day	SULFATES (SO_4) Tons/Day Wt. Mean	Extremes Max. Day	Extremes Min. Day	DISSOLVED SOLIDS (103° C) Milligrams/Liter Wt. Mean	Extremes Max. Day	Extremes Min. Day	DISSOLVED SOLIDS (103° C) Tons/Day Wt. Mean	Extremes Max. Day	Extremes Min. Day
1960	July	18.8	808	2800	83	385	1450	223	85	321	49	224	540	95	14	54	8	38	91	16	223	840	129	588	1420	250
	Aug.	31.0	391	2810	95	536	1350	315	118	298	70	125	528	48	20	50	12	21	88	8	310	781	183	327	1380	127
	Sept	30.0	67	186	16	865	1250	703	191	277	155	35	88	12	32	46	26	6	15	2	501	725	407	90	230	32
	SUMMARY	79.8	422	2810	16	470	1450	223	104	321	49	114	540	12	23	54	8	19	91	2	272	840	129	299	1420	32
1960	Oct.	31.0	101	333	27	1050	2020	700	230	446	155	62	211	21	38	57	31	10	35	3	605	1170	405	164	553	54
	Nov.	30.0	127	183	80	840	1570	597	185	348	132	63	158	40	34	49	29	12	22	8	487	911	346	167	413	104
	Dec.	31.0	213	621	73	799	1420	526	176	314	116	101	256	31	33	45	28	19	50	7	463	823	305	265	670	82
1961	Jan.	31.0	100	205	61	1050	1210	880	230	266	195	62	107	44	38	41	35	10	19	7	605	697	510	163	281	115
	Feb.	28.0	221	709	73	952	1550	558	210	343	123	125	501	54	36	48	28	21	78	8	552	899	323	329	1310	141
	Mar.	31.0	242	1640	101	963	1400	654	212	310	145	138	637	68	36	45	30	23	132	11	557	811	379	363	1670	179
	Apr.	30.0	574	1750	115	697	1130	491	154	249	109	238	594	77	31	40	27	48	132	12	404	651	285	625	1560	202
	May	31.0	1220	3040	101	473	1280	313	104	283	69	341	588	76	26	43	23	85	189	11	274	742	181	899	1540	200
	June	30.0	1170	2950	189	423	717	297	93	159	66	293	526	81	25	31	23	79	183	16	265	415	172	773	1380	211
	July	31.0	1980	3650	120	313	1210	180	69	267	40	367	738	64	23	41	21	122	217	11	181	698	104	964	1930	169
	Aug.	31.0	277	1190	133	605	848	407	133	187	90	99	300	59	29	34	25	22	83	11	350	491	236	261	787	155
	Sept	30.0	936	2840	72	398	1240	273	88	274	60	222	682	47	25	42	22	63	175	8	231	718	158	582	1790	123
	SUMMARY	365.0	596	3650	27	499	2020	180	110	446	40	177	738	21	27	57	21	44	217	3	289	1170	104	466	1930	54
1961	Oct.	31.0	319	582	121	697	995	500	154	220	111	132	271	71	31	37	27	27	50	12	404	576	290	347	709	187
	Nov.	30.0	868	2550	125	592	1320	400	130	291	88	304	708	71	29	43	25	68	172	12	343	762	222	802	1860	186
	Dec.	31.0	847	2510	297	673	1100	441	148	243	97	338	801	177	30	39	25	68	190	30	390	637	255	890	2100	461
1962	Jan.	31.0	401	516	317	1150	1390	963	253	307	213	273	389	201	40	45	36	43	59	34	665	804	558	718	1020	528
	Feb.	28.0	264	334	221	1310	1520	1150	290	335	254	206	275	177	43	47	40	31	39	27	761	878	665	542	719	465
	Mar.	31.0	701	2440	187	830	1490	470	183	330	104	346	863	151	34	47	26	64	185	22	481	863	272	909	2260	397
	Apr.	30.0	1190	2560	321	653	1240	435	144	273	96	461	782	220	30	42	26	96	186	37	378	715	252	1210	2050	576
	May	31.0	353	999	83	924	1990	509	204	440	113	194	524	77	35	57	27	33	86	11	535	1150	295	509	1370	203
	June	30.0	2800	7680	361	364	797	282	80	176	62	603	1370	162	24	33	23	181	477	31	211	461	164	1590	3630	425
	July	31.0	916	4790	172	372	951	169	82	210	37	202	614	75	24	36	20	59	272	15	215	551	98	531	1610	196
	Aug.	31.0	80	290	19	1050	1530	813	232	337	180	50	140	17	38	48	33	8	26	2	610	883	471	132	367	45
	Sept	30.0	1270	3360	174	386	1400	209	85	309	46	292	482	89	25	45	21	86	199	20	224	810	121	769	1260	233
	SUMMARY	365.0	834	7680	19	574	1990	169	127	440	37	284	1370	17	28	57	20	63	477	2	333	1150	98	746	3630	45

MONTHLY SUMMARY OF CONTINUOUS RECORDED FLOW AND QUALITY DATA

River Basin: Arkansas Station Numbers: PHS: 765 USGS: 2421.00

Stream and Location: Wewoka Creek near Wetumka, Oklahoma, Lat.35°13'15", long. 96°13'00", SE¼,Sec.26,T.9 N., R.10 E., at bridge on County Hwy, 1.75 miles SE of Wetumka, Hughes County, Okla., and 5 river mi. upstream from mouth.

Main Stream Flow: 248 cfs; Range: 134-445 CFS Years: 3

NOTES:

Equations Used to Compute Concentrations From Specific Conductance

	Number Samples	Equations	Std. Error	Correl. Coeff.
Dissolved Solids:	26	TDS = 0.5851 Sp. C.	340	0.9569
Chlorides:	133	Cl = 0.3469 Sp. C.	77	0.9932
Sulfates:	133	SO_4 = 0.0031 Sp. C. + 20	13	0.4010

Remarks: Records fair. Stratification nil. Instantaneous conductivity range 25-7900 micromhos. The flow recurrence intervals for water years 1961 and 1962 are 6.0 and 1.2 respectively.

Year	Month	Number of Days of Specific Conductance Record	STREAM FLOW Cubic Feet/Second Mean	Extremes Max. Day	Extremes Min. Day	SPECIFIC CONDUCTANCE Micromhos/Centimeter @ 25° C Wt. Mean	Extremes Max. Day	Extremes Min. Day	CHLORIDES (Cl) Milligrams/Liter Wt. Mean	Extremes Max. Day	Extremes Min. Day	Tons/Day Wt. Mean	Extremes Max. Day	Extremes Min. Day	SULFATES (SO_4) Milligrams/Liter Wt. Mean	Extremes Max. Day	Extremes Min. Day	Tons/Day Wt. Mean	Extremes Max. Day	Extremes Min. Day	DISSOLVED SOLIDS (103° C) Milligrams/Liter Wt. Mean	Extremes Max. Day	Extremes Min. Day	Tons/Day Wt. Mean	Extremes Max. Day	Extremes Min. Day
1960	July	31.0	50	811	5	3520	7540	1410	1220	2620	489	164	2890	23	31	43	25	4	70	1	2060	4410	824	277	4870	39
	Aug.	15.3	45	798	3	2150	3190	1550	747	1110	536	164	1620	13	27	30	25	6	58	1	1260	1870	904	277	2720	22
	Sept	21.6	5	28	0	4270	5260	2010	1480	1830	696	17	116	1	33	36	27	0	3	1	2500	3080	1170	28	196	2
SUMMARY		68.0	33	811	0	2960	7540	1410	1020	2620	489	117	2890	1	26	43	25	3	70	1	1730	4410	824	198	4870	2
1960	Oct.	31.0	37	426	1	2160	7000	691	750	2430	240	75	878	5	27	42	22	3	31	0	1270	4100	404	125	1480	8
	Nov.	30.0	6	38	2	2070	3250	1630	718	1130	567	11	59	4	26	30	25	0	3	0	1210	1900	956	18	100	7
	Dec.	31.0	133	2030	2	1060	3540	504	369	1230	175	132	1160	7	23	31	22	8	122	0	622	2070	295	222	1960	11
1961	Jan.	31.0	46	530	10	2480	5900	1160	861	2050	404	106	1240	46	28	38	24	3	40	2	1450	3450	681	178	2080	78
	Feb.	28.0	49	381	14	2760	5800	1100	958	2010	382	126	129	67	29	38	23	4	4	2	1620	3400	644	213	218	113
	Mar.	31.0	383	5020	20	1010	4500	700	349	1560	243	360	3290	45	23	34	22	24	298	2	589	2630	410	608	5560	76
	Apr.	30.0	160	1160	29	1800	4820	850	626	1670	295	270	925	119	26	35	23	11	72	3	1060	2820	497	454	1558	200
	May	31.0	344	4070	26	1140	4680	623	394	1620	216	365	3380	56	24	35	22	22	253	2	677	2740	365	628	5690	95
	June	30.0	80	572	12	2250	5040	1360	780	1750	470	168	864	23	27	36	25	6	39	1	1310	2950	793	284	1460	38
	July	31.0	472	3290	16	787	3380	393	273	1170	136	347	1460	30	22	31	22	28	192	1	460	1980	230	585	2460	50
	Aug.	31.0	69	1030	7	1960	3690	965	679	1280	335	125	1400	14	26	32	23	5	69	1	1140	2160	565	210	2350	24
	Sept	30.0	230	2600	6	1170	4470	537	406	1550	186	252	2050	11	24	34	22	15	161	0	684	2610	314	424	3460	19
SUMMARY		365.0	167	5020	1	1240	7000	393	429	2430	136	195	3380	4	24	42	22	11	298	0	724	4100	230	329	5690	7
1961	Oct.	31.0	82	810	12	2100	5790	1300	728	2010	450	161	1050	35	26	38	24	6	54	1	1230	3390	761	272	1780	58
	Nov.	30.0	254	2170	17	1010	4070	426	350	1410	148	239	1540	59	23	33	22	16	133	1	590	2380	249	404	2590	99
	Dec.	31.0	185	1140	56	1730	4400	704	599	1530	244	298	1030	162	25	34	23	12	69	5	1010	2570	412	503	1730	274
1962	Jan.	31.0	60	95	42	4710	5600	3960	1640	1940	1370	266	420	168	35	37	32	6	9	4	2760	3280	2310	448	708	283
	Feb.	28.0	41	86	25	4730	6320	3600	1640	2190	1250	168	388	118	35	39	31	4	8	2	2770	3700	2110	304	655	199
	Mar.	31.0	210	1180	32	1390	4100	825	481	1420	286	272	1220	103	24	33	23	14	70	3	812	2400	483	459	2050	173
	Apr.	30.0	463	5530	36	1060	4140	575	367	1440	200	458	3160	139	23	33	22	29	328	3	618	2420	337	771	5330	235
	May	31.0	51	175	9	3170	5800	1410	1100	2010	489	150	537	33	30	38	25	4	13	1	1850	3390	824	253	905	55
	June	30.0	156	1550	11	1350	4380	476	468	1520	165	197	1320	25	24	34	22	10	91	1	790	2560	278	332	2230	42
	July	31.0	76	912	1	1220	2550	684	423	885	237	86	813	1	24	28	23	5	57	0	714	1490	400	146	1370	2
	Aug.	31.0	5	23	2	808	1300	198	280	451	69	3	28	0	22	24	21	0	2	0	473	761	116	6	48	1
	Sept	30.0	29	195	3	2040	3340	1180	709	1160	410	55	426	4	26	31	24	2	14	1	1200	1950	691	93	718	6
SUMMARY		365.0	134	5530	1	1570	6320	198	546	2190	69	197	3160	0	25	39	21	9	328	0	920	3700	116	332	5330	1

MONTHLY SUMMARY OF CONTINUOUS RECORDED FLOW AND QUALITY DATA

River Basin: Arkansas Station Numbers: PHS: 388 USGS: 2420.00

Stream and Location: North Canadian River near Wetumka, Oklahoma
Lat. 35°15'40", long. 96°12'40", SW¼, Sec. 12, T.9 N., R.16 E., at bridge on U. S. Hwy 75, 2.5 miles NE of Wetumka, Hughes County, Oklahoma and at river mile 84.4.

Equations Used to Compute Concentrations From Specific Conductance

	Number Samples	Equations	Std. Error	Correl. Coeff.
Dissolved Solids:	26	DS = 0.6074 Sp.C.	89	0.9641
Chlorides:	129	Log Cl = 1.1024 Log Sp.C. - 0.9627	0.1162	0.9097
Sulfates:	97	SO_4 = 0.0521 Sp.C. + 24	35	0.6104

Main Stream Flow: 771 cfs Range: 156 - 3810 cfs Years: 25

Remarks: Records good. Occasional minor stratification. Instantaneous conductivity range 50-2950 micromhos. The flow recurrence intervals for water years 1961 and 1962 are 1.72 and 1.61 respectively.

Year	Month	Number of Days of Specific Conductance Record	STREAM FLOW Cubic Feet/Second Mean	Extremes Max. Day	Extremes Min. Day	SPECIFIC CONDUCTANCE Micromhos/Centimeter @ 25° C Wt. Mean	Extremes Max. Day	Extremes Min. Day	CHLORIDES (Cl) Milligrams/Liter Wt. Mean	Extremes Max. Day	Extremes Min. Day	CHLORIDES (Cl) Tons/Day Wt. Mean	Extremes Max. Day	Extremes Min. Day	SULFATES (SO_4) Milligrams/Liter Wt. Mean	Extremes Max. Day	Extremes Min. Day	SULFATES (SO_4) Tons/Day Wt. Mean	Extremes Max. Day	Extremes Min. Day	DISSOLVED SOLIDS (103° C) Milligrams/Liter Wt. Mean	Extremes Max. Day	Extremes Min. Day	DISSOLVED SOLIDS (103° C) Tons/Day Wt. Mean	Extremes Max. Day	Extremes Min. Day
1960	July	24.6	633	4770	162	1080	2860	540	244	703	112	481	2430	204	69	183	35	136	704	55	654	1740	328	1290	6680	523
	Aug.	31.0	281	763	150	1230	2190	550	280	522	114	211	659	65	79	140	35	59	185	20	746	1330	334	564	1750	190
	Sept	27.9	109	180	80	2010	2550	939	475	618	206	140	182	100	128	163	60	38	49	29	1220	1550	570	357	462	277
SUMMARY		83.5	341	4770	80	1220	2860	540	280	703	112	267	2434	65	92	183	35	75	704	20	743	1740	328	708	6680	190
1960	Oct.	31.0	340	2180	66	1300	2350	895	295	565	195	270	1220	84	91	146	71	83	355	23	786	1430	544	719	3370	216
	Nov.	30.0	475	1880	209	996	1430	745	220	327	160	282	807	159	76	99	63	97	241	45	605	869	452	774	2290	427
	Dec.	31.0	364	1190	189	1170	2000	659	262	473	139	257	446	168	85	128	58	83	135	47	707	1210	400	693	1280	447
1961	Jan.	31.0	185	355	103	1920	2380	1600	452	573	371	225	355	159	123	148	108	61	98	42	1160	1440	973	578	930	402
	Feb.	28.0	338	783	187	1320	1930	754	301	454	162	274	597	209	93	123	63	85	169	65	805	1170	458	733	1600	560
	Mar.	31.0	432	1910	203	1270	1650	750	352	384	163	410	840	207	90	110	63	105	326	58	771	1000	456	897	2360	550
	Apr.	30.0	563	1430	159	1080	1700	582	239	396	122	363	719	161	80	113	54	121	206	45	653	1030	353	991	1960	422
	May	31.0	777	3760	194	875	1910	310	190	450	61	400	1260	196	70	122	40	146	379	62	531	1160	188	1140	3600	589
	June	30.0	611	1280	248	1160	1500	914	260	345	200	426	841	230	84	102	71	138	242	64	702	911	555	1160	2300	607
	July	31.0	1220	6510	182	509	1540	175	105	355	33	346	1430	123	51	104	31	168	449	37	309	935	106	1020	4260	349
	Aug.	31.0	237	1020	126	1336	1900	424	304	449	86	194	349	74	94	123	46	60	106	23	811	1150	257	519	1010	220
	Sept	30.0	893	4140	98	772	2000	361	166	470	72	400	1300	118	64	127	49	154	393	32	469	1210	219	1130	3730	303
SUMMARY		365.0	536	6510	66	976	2380	175	215	573	33	311	1430	74	75	148	31	108	449	23	593	1440	106	858	4260	216
1961	Oct.	31.0	448	1280	223	1130	1520	749	253	350	160	305	1100	205	83	103	63	100	308	57	687	924	455	830	2930	545
	Nov.	30.0	816	2550	236	898	1730	458	197	404	93	431	859	192	71	114	48	156	244	58	545	1050	278	1200	2320	552
	Dec.	31.0	573	1700	380	1220	1720	615	277	401	129	427	790	348	88	114	56	136	234	100	743	1040	373	1150	2220	950
1962	Jan.	31.0	373	530	125	1830	2080	1480	428	493	340	431	704	153	117	133	101	120	190	42	1110	1260	899	1120	1800	394
	Feb.	28.0	359	491	225	1740	2300	1560	405	552	360	392	672	311	114	144	105	110	179	84	1050	1400	947	1020	1700	799
	Mar.	31.0	433	1500	208	1330	2200	783	303	526	169	352	997	229	93	139	64	108	284	66	806	1340	475	941	2690	629
	Apr.	30.0	604	3270	223	1150	1950	556	258	455	116	420	1300	230	84	126	53	137	376	64	700	1180	338	1140	3560	606
	May	31.0	313	1570	147	1450	2200	609	335	526	128	282	1060	162	100	139	56	84	302	45	882	1340	370	743	2870	428
	June	30.0	1540	3980	511	806	1470	413	175	338	83	723	1530	280	66	101	46	274	459	84	489	894	251	2040	4360	798
	July	31.0	363	976	139	1290	1740	400	234	406	80	287	610	89	91	115	45	89	176	26	786	1060	243	768	1670	251
	Aug.	31.0	95	175	52	1820	2560	793	427	620	171	109	160	53	119	157	65	30	42	15	1104	1550	482	282	408	138
	Sept	30.0	253	793	99	1070	2360	283	238	567	55	162	374	92	80	147	39		111	25	650	1430	172	443	1050	245
SUMMARY		365.0	514	3980	52	1160	2560	283	259	620	55	358	1530	53	84	157	39	116	459	45	702	1550	172	969	4360	138

MONTHLY SUMMARY OF CONTINUOUS RECORDED FLOW AND QUALITY DATA

River Basin: Arkansas Station Numbers: FHS: 387 USGS: 2415.00

Stream and location: North Canadian River near Oklahoma City, Oklahoma
Lat. 35° 29'40", long. 97° 25'40", north line of Sec. 29, T.12 N., R.2 W., at bridge on U. S. Hwy 62, 2 mi. east of Okla. City, Okla. County, Okla., and at river mile 261.2.

Main Stream Flow: 380 cfs; Range: 56-953 cfs Years: 16

NOTES:

Equations Used to Compute Concentrations From Specific Conductance

	Number Samples	Equations	Std. Error	Correl. Coeff.
Dissolved Solids:	25	DS = 0.6012 Sp. C.	99.	0.9853
Chlorides:	68	Log Cl = 1.3975 Log Sp.C. - 1.9511	0.0485	0.9841
Sulfates:	35	SO_4 = 0.03375 Sp.C. + 162	31	0.6621

Remarks: Records poor. Frequent minor stratification. Instantaneous conductivity range 10-4800 micromhos.

Year	Month	Number of Days of Specific Conductance Record	STREAM FLOW Cubic Feet/Second Mean	Extremes Max. Day	Extremes Min. Day	SPECIFIC CONDUCTANCE Micromhos/Centimeter @ 25° C Wt. Mean	Extremes Max. Day	Extremes Min. Day	CHLORIDES (Cl) Milligrams/Liter Wt. Mean	Extremes Max. Day	Extremes Min. Day	CHLORIDES (Cl) Tons/Day Wt. Mean	Extremes Max. Day	Extremes Min. Day	SULFATES (SO_4) Milligrams/Liter Wt. Mean	Extremes Max. Day	Extremes Min. Day	SULFATES (SO_4) Tons/Day Wt. Mean	Extremes Max. Day	Extremes Min. Day	DISSOLVED SOLIDS (103° C) Milligrams/Liter Wt. Mean	Extremes Max. Day	Extremes Min. Day	DISSOLVED SOLIDS (103° C) Tons/Day Wt. Mean	Extremes Max. Day	Extremes Min. Day
1960	July	31.0	247	2990	46	1380	4110	560	314	1270	83	208	672	75	121	362	49	80	397	26	826	2470	337	549	2710	180
	Aug.	31.0	85	506	36	2230	3210	1120	560	899	215	128	304	72	197	282	98	45	134	27	1340	1930	672	306	916	184
	Sept	30.0	68	231	43	2740	3380	1750	728	961	393	133	334	94	241	297	154	44	109	31	1650	2030	1050	302	742	214
SUMMARY		92.0	133	2990	36	1780	4110	560	435	1270	83	157	672	72	186	362	49	56	397	26	1070	2470	337	387	2710	180
1960	Oct.	31.0	559	3040	30	949	2990	550	162	806	77	244	1210	34	194	263	181	292	1550	18	570	1800	331	859	3960	92
	Nov.	30.0	270	1180	63	1310	1800	900	254	397	150	185	513	83	206	611	192	150	611	49	787	1080	541	572	1770	231
	Dec.	31.0	171	514	51	1673	3000	1070	357	810	193	155	297	60	218	263	198	95	275	35	1000	1800	644	436	930	173
1961	Jan.	31.0	95	230	42	2070	2810	1520	481	737	313	123	267	83	232	257	213	59	134	29	1240	1690	913	318	662	191
	Feb.	28.0	201	508	59	1360	2050	1000	268	475	174	145	294	74	208	231	196	113	272	36	818	1230	601	443	952	195
	Mar.	31.0	243	828	80	1520	2210	1150	311	527	212	203	516	114	213	236	201	139	454	51	911	1330	691	596	1640	288
	Apr.	30.0	305	689	57	1390	2870	975	275	760	168	225	460	117	209	259	195	171	353	40	833	1720	586	682	1400	266
	May	31.0	310	619	89	1490	2000	1175	305	460	218	255	666	88	212	230	202	177	350	53	898	1202	706	750	1440	246
	June																									
	July																									
	Aug.																									
	Sept																									
SUMMARY		243.0	268	3040	30	1340	3000	550	261	810	77	189	1210	34	207	611	181	150	1550	18	806	1800	331	583	3960	92
1961	Oct.																									
	Nov.																									
	Dec.																									
1962	Jan.																									
	Feb.																									
	Mar.																									
	Apr.																									
	May																									
	June																									
	July																									
	Aug.																									
	Sept																									
SUMMARY																										

MONTHLY SUMMARY OF CONTINUOUS RECORDED FLOW AND QUALITY DATA

River Basin: Arkansas Station Numbers: PHS: 762 USGS: 2410.00

Stream and Location: North Canadian River near Oklahoma City, Oklahoma
Lat. 35°28'44", long. 97°39'47", on north line of Sec. 31,
T.12 N., R.4 W, below dam on Lake Overholser near Okla.
City, Oklahoma County, Okla., and at river mi. 281.0.

Main Stream Flow: 149 cfs; Range: 0.42-488 cfs Years: 10

NOTES:

Equations Used to Compute Concentrations From Specific Conductance

	Number Samples	Equations	Std. Error	Correl. Coeff.
Dissolved Solids:	38	TDS = 0.6473 Sp. C.	63.	0.9133
Chlorides:	170	Cl = 0.1300 Sp. C.	11.	0.9577
Sulfates:	167	SO_4 = 0.1797 Sp. C.	24.	0.9006

Remarks: Records good. Stratification nil. Instantaneous conductivity range 10-1600 micromhos. The flow recurrence intervals for water years 1961 and 1962 are 2.86 and 2.22 respectively.

Year	Month	Number of Days of Specific Conductance Record	STREAM FLOW Cubic Feet/Second Mean	Extremes Max. Day	Extremes Min. Day	SPECIFIC CONDUCTANCE Micromhos/Centimeter @ 25° C Wt. Mean	Extremes Max. Day	Extremes Min. Day	CHLORIDES (Cl) Milligrams/Liter Wt. Mean	Extremes Max. Day	Extremes Min. Day	CHLORIDES (Cl) Tons/Day Wt. Mean	Extremes Max. Day	Extremes Min. Day	SULFATES (SO_4) Milligrams/Liter Wt. Mean	Extremes Max. Day	Extremes Min. Day	SULFATES (SO_4) Tons/Day Wt. Mean	Extremes Max. Day	Extremes Min. Day	DISSOLVED SOLIDS (103° C) Milligrams/Liter Wt. Mean	Extremes Max. Day	Extremes Min. Day	DISSOLVED SOLIDS (103° C) Tons/Day Wt. Mean	Extremes Max. Day	Extremes Min. Day
1960	July	28.1	46	474	6	943	1050	800	123	137	104	15	154	2	170	189	144	21	213	3	610	679	518	75	765	9
	Aug.	16.5	13	28	9	792	940	287	103	122	37	4	7	1	143	169	52	5	9	2	513	608	186	18	32	7
	Sept	25.4	10	70	3	681	950	309	89	124	40	2	3	1	123	171	56	2	4	1	441	615	200	8	14	5
SUMMARY		70 ½	23	474	3	895	1050	287	125	137	37	8	154	1	157	189	52	10	213	1	579	679	186	37	765	5
1960	Oct.	31.0	475	3010	9	591	1350	364	77	175	47	98	627	3	106	243	66	136	867	4	383	873	236	490	3120	15
	Nov.	30.0	208	916	57	1030	1220	875	134	159	114	75	281	22	186	220	158	106	389	31	668	791	566	374	1400	110
	Dec.	31.0	63	210	4	1140	1270	763	148	165	99	25	87	1	205	229	137	35	121	2	739	873	494	125	434	7
1961	Jan.	31.0	45	143	4	1060	1210	850	138	158	111	17	61	2	191	218	153	23	84	2	685	784	550	83	301	7
	Feb.	28.0	127	338	6	1110	1210	1020	144	158	132	49	130	2	200	218	183	68	180	3	718	785	659	246	648	12
	Mar.	31.0	175	566	70	1180	1300	1104	153	169	144	72	227	30	212	234	198	100	314	42	762	840	714	360	1130	151
	Apr.	30.0	210	492	8	1120	1270	841	146	165	109	83	198	3	202	229	151	114	274	4	726	822	544	411	985	13
	May	31.0	232	580	15	1200	1300	62	156	169	8	98	252	1	217	234	11	135	349	1	778	841	40	486	1250	2
	June	30.0	313	1440	14	1060	1200	780	138	156	101	116	538	4	191	216	140	161	745	5	687	776	504	580	2680	19
	July	31.0	17	93	7	970	1100	775	126	143	101	6	32	2	174	198	139	8	44	3	628	712	501	30	160	12
	Aug.	31.0	11	27	7	1010	1100	629	131	143	82	4	10	3	181	198	113	5	14	4	650	712	407	19	49	13
	Sept	30.0	382	4370	8	494	1110	312	64	144	41	67	655	3	89	200	56	93	906	4	319	719	202	329	3260	13
SUMMARY		365.0	188	4370	4	896	1350	62	116	175	8	59	655	1	161	243	11	81	906	1	580	873	40	293	3260	2
1961	Oct.	31.0	108	826	11	821	1440	501	107	187	65	31	198	3	148	259	90	43	274	4	532	932	324	155	983	14
	Nov.	30.0	323	1300	61	853	1440	392	111	187	51	97	212	30	154	258	71	134	293	42	552	929	253	480	1050	151
	Dec.	31.0	146	273	99	1330	1520	999	173	198	130	68	119	46	240	274	180	94	165	64	863	986	647	339	592	231
1962	Jan.	31.0	70	184	9	1260	1410	945	163	184	123	31	75	3	226	255	170	43	104	4	812	915	611	154	375	15
	Feb.	28.0	205	468	7	1240	1340	938	161	174	122	89	186	2	224	241	169	124	258	3	803	867	607	445	927	12
	Mar.	31.0	54	197	6	1310	1530	963	170	199	123	25	87	2	235	276	170	34	120	3	844	992	610	123	431	11
	Apr.	30.0	27	208	8	1160	1250	1020	151	162	132	11	83	3	209	224	183	15	114	4	752	806	657	55	411	14
	May	31.0	26	317	3	1250	1330	1050	163	173	136	11	147	1	226	239	189	16	204	1	811	859	679	56	733	5
	June	30.0	756	4060	31	903	1280	429	117	167	56	239	750	9	163	231	77	331	1040	13	584	831	277	1190	3730	47
	July	31.0	75	505	7	1110	1220	963	144	159	123	29	188	3	200	220	170	40	260	3	719	791	610	145	935	12
	Aug.	31.0	8	18	4	1020	1090	969	133	142	126	3	6	1	184	196	175	4	9	2	662	704	627	13	32	7
	Sept	30.0	6	8	4	925	1130	850	120	147	111	2	3	2	167	203	153	3	4	2	599	629	550	10	14	7
SUMMARY		365.0	150	4060	3	1010	1530	392	131	199	51	52	750	1	181	276	71	72	1040	1	651	992	253	260	3730	5

MONTHLY SUMMARY OF CONTINUOUS RECORDED FLOW AND QUALITY DATA

River Basin: Arkansas **Station Numbers:** PHS: 308 USGS: 7315.00

Stream and Location: Canadian River at Calvin, Oklahoma
Lat. 34°58', long. 96 14', NE¼SE¼, Sec. 22, T. 6N., R. 10E.,
at bridge on U.S. Hwy. 75, 1 mile north of Calvin, Hughes
County, Oklahoma and at river mile 93.9.

Main Stream Flow: 1972 cfs **Range:** 393-5510 cfs **Years:** 23

Equations Used to Compute Concentrations From Specific Conductance

	Number Samples	Equations	Std. Error	Correl. Coeff.
Dissolved Solids:	25	DS = 0.4172 Sp. C.	96	0.9538
Chlorides:	133	Log Cl= 1.3039 Log Sp. C.-1.4386	0.0699	0.9644
Sulfates:	103	SO = 0.0899 Sp. C. + 14	52	0.6628

Remarks: Records fair. Frequent minor stratification. High flows tend to increase stratification. Instantaneous conductivity range 50-3350 micromhos. The flow recurrence intervals for water year 1961 and 1962 are 1.84 and 1.59 respectively.

Year	Month	Number of Days of Specific Conductance Record	STREAM FLOW Cubic Feet/Second Mean	Extremes Max. Day	Extremes Min. Day	SPECIFIC CONDUCTANCE Micromhos/Centimeter @ 25° C Wt. Mean	Extremes Max. Day	Extremes Min. Day	CHLORIDES (Cl) Milligrams/Liter Wt. Mean	Extremes Max. Day	Extremes Min. Day	CHLORIDES (Cl) Tons/Day Wt. Mean	Extremes Max. Day	Extremes Min. Day	SULFATES (SO_4) Milligrams/Liter Wt. Mean	Extremes Max. Day	Extremes Min. Day	SULFATES (SO_4) Tons/Day Wt. Mean	Extremes Max. Day	Extremes Min. Day	DISSOLVED SOLIDS (103° C) Milligrams/Liter Wt. Mean	Extremes Max. Day	Extremes Min. Day	DISSOLVED SOLIDS (103° C) Tons/Day Wt. Mean	Extremes Max. Day	Extremes Min. Day
1960	July	31.0	4360	21300	116	1080	1650	570	211	360	90	2600	14100	95	96	143	50	1150	6130	39	666	1020	352	8180	43500	278
	Aug.	31.0	2220	10800	173	1060	1820	602	200	410	97	1200	5750	116	90	158	52	560	2340	50	640	1120	372	3830	16600	358
	Sept	30.0	405	2750	42	1250	2230	808	258	536	142	281	2020	58	109	196	70	119	856	22	774	1380	498	844	6070	153
	SUMMARY	92.0	2400	21300	42	1070	2230	570	210	536	90	1370	14100	58	98	194	50	610	6130	22	661	1380	352	4320	43500	153
1960	Oct.	31.0	3610	13600	143	923	1570	600	169	337	96	1550	8890	130	97	155	68	891	4520	80	570	969	370	5240	27500	373
	Nov.	30.0	498	2310	247	1150	1700	650	225	372	107	302	666	195	117	167	72	157	448	112	710	1050	401	953	2500	682
	Dec.	31.0	1620	9810	222	1120	1810	550	217	406	86	947	2710	230	114	177	63	498	1760	102	689	1120	339	3010	9480	639
1961	Jan.	31.0	737	3360	200	1540	2270	1160	329	545	220	653	2460	288	152	218	116	302	1190	117	950	1400	704	1890	7250	750
	Feb.	28.0	976	3530	373	1520	1800	1180	322	400	236	867	3000	292	150	176	120	395	1420	141	935	1110	728	2460	8830	870
	Mar.	31.0	2280	19400	348	1180	2080	725	231	487	123	1421	8630	430	120	199	79	738	4130	180	725	1270	447	4460	23400	881
	Apr.	30.0	1510	6900	225	1440	2230	825	300	532	145	1223	2700	313	143	214	88	583	1640	127	886	1380	509	3810	9490	813
	May	31.0	1910	11300	177	832	2270	454	147	548	69	756	3110	103	89	218	55	458	2130	54	513	1400	280	2640	11700	328
	June	30.0	1725	9560	400	917	1780	670	187	400	112	776	3050	55	96	174	74	446	1960	35	566	1100	414	2630	11000	200
	July	31.0	1970	9860	130	779	1950	410	135	467	59	717	4780	76	86	189	51	446	2630	41	481	1200	253	2550	13600	248
	Aug.	31.0	590	6220	71	1050	1810	600	201	402	96	319	2440	69	109	177	68	173	1260	31	650	1120	370	1030	7670	196
	Sept	30.0	1530	12000	121	766	1950	499	128	467	76	529	2500	83	81	189	59	335	1910	43	460	1200	308	1900	10100	259
	SUMMARY	365.0	1560	19600	71	1030	2270	410	196	566	59	830	8890	55	107	218	51	433	4520	31	638	1400	253	2700	27500	196
1961	Oct.	31.0	1100	7010	163	866	2170	676	151	516	113	447	2170	175	90	209	75	266	1440	76	522	1360	416	1550	7980	682
	Nov.	30.0	2200	10800	360	890	2120	700	163	505	118	968	3770	243	95	205	77	564	2390	133	555	1310	432	3300	13500	801
	Dec.	31.0	1190	4460	565	1350	1800	896	276	404	162	886	3070	641	135	176	94	433	1580	216	830	1110	552	2660	9540	1310
1962	Jan.	31.0	537	1600	169	1730	2690	1460	384	618	306	555	1320	260	170	238	145	268	625	103	1070	1540	901	1550	3860	659
	Feb.	28.0	342	1720	272	1750	2120	1660	390	501	301	570	1440	325	172	205	143	251	675	142	1080	1310	889	1580	4160	892
	Mar.	31.0	830	3360	206	1260	2200	612	268	527	99	554	1880	243	125	232	69	279	799	103	764	1360	378	1710	5050	634
	Apr.	30.0	1390	7110	249	1130	2270	732	229	569	125	827	3760	262	115	218	80	432	2050	119	637	1400	452	2620	12200	741
	May	31.0	533	4020	82	1290	3160	773	282	842	136	376	1660	160	130	298	83	181	976	50	797	1950	477	1150	5670	325
	June	30.0	3780	18800	401	866	1120	690	108	217	76	1080	4370	211	72	115	58	733	3200	121	399	691	302	4060	17200	724
	July	31.0	185	900	68	1320	2000	794	270	463	139	136	513	61	133	196	85	66	273	19	816	1230	490	408	1640	120
	Aug.	31.0	1290	12600	8	1730	2280	1210	389	568	260	1350	13500	7	171	218	123	596	3400	3	1080	1610	747	3750	37100	22
	Sept	30.0	863	3660	47	973	1620	650	181	336	107	421	1750	26	101	160	72	235	916	12	600	1000	401	1400	5530	73
	SUMMARY	365.0	1200	18800	8	1080	2280	490	209	862	76	886	13500	7	111	298	58	359	5800	3	883	1950	302	2340	37100	22

MONTHLY SUMMARY OF CONTINUOUS RECORDED FLOW AND QUALITY DATA

River Basin: Arkansas Station Numbers: PMS: 367 USGS: 2310.00

Stream and location: Little River near Sasakwa, Oklahoma
Lat. 34°59'02", long 96°23'01", NW¼, Sec. 22, T.6 N., R.7 E., at bridge on County Hwy., 2.75 mi. NW of Sasakwa, Seminole County, Okla., and 24.1 river mi. above mouth.

Main Stream Flow 440 cfs: Range: 50-1106 CFS Years: 20

NOTES:

Equations Used to Compute Concentrations From Specific Conductance

	Number Samples	Equations	Std. Error	Correl. Coeff.
Dissolved Solids:	25	DS = 0.5886 Sp. C.	169	0.9756
Chlorides:	127	Cl = 0.3086 Sp. C.	50	0.9927
Sulfates:	127	SO_4 = 0.0870 Sp. C. + 18	12	0.5804

Remarks: Records good. Occasional minor stratification. Instantaneous conductivity range 75-9500 micrombos. The flow recurrence intervals for water years 1961 and 1962 are 1.91 and 1.29 respectively.

Year	Month	Number of Days of Specific Conductance Record	STREAM FLOW, Cubic Feet/Second: Mean	Extremes: Max. Day	Extremes: Min. Day	SPECIFIC CONDUCTANCE, Micrombos/Centimeter @ 25° C: Wt. Mean	Extremes: Max. Day	Extremes: Min. Day	CHLORIDES (Cl): Milligrams/Liter: Wt. Mean	Extremes: Max. Day	Extremes: Min. Day	Tons/Day: Wt. Mean	Extremes: Max. Day	Extremes: Min. Day	SULFATES (SO_4): Milligrams/Liter: Wt. Mean	Extremes: Max. Day	Extremes: Min. Day	Tons/Day: Wt. Mean	Extremes: Max. Day	Extremes: Min. Day	DISSOLVED SOLIDS (180° C): Milligrams/Liter: Wt. Mean	Extremes: Max. Day	Extremes: Min. Day	Tons/Day: Wt. Mean	Extremes: Max. Day	Extremes: Min. Day
1960	July	31.0	675	4850	36	661	6320	292	284	1950	90	372	2200	52	23	62	20	41	260	3	389	3720	172	708	4230	100
	Aug.	31.0	333	2400	49	830	4600	325	256	1420	101	230	1150	46	24	50	20	21	130	4	489	2710	192	438	2220	87
	Sept	30.0	40	89	24	2900	4490	1020	896	1450	315	93	234	56	38	51	25	4	9	3	1710	2760	600	182	446	107
SUMMARY		92.0	349	4850	24	795	6320	292	246	1950	90	234	2220	46	23	62	20	22	260	3	468	3720	172	446	4230	87
1960	Oct.	31.0	177	1270	14	1460	7600	684	451	2350	211	215	965	36	28	71	23	13	81	2	860	4470	603	410	1840	68
	Nov.	30.0	57	165	36	2610	3890	1210	804	1200	372	124	231	90	36	45	26	5	13	4	1540	2290	710	236	439	172
	Dec.	31.0	336	2220	30	1580	4120	800	489	1270	247	443	1700	77	29	47	24	26	161	3	931	2620	471	844	3240	146
1961	Jan.	31.0	127	737	59	2891	4720	1500	830	1460	462	284	1060	144	37	51	28	13	60	7	1584	2780	881	541	2020	313
	Feb.	28.0	142	399	83	2480	4690	889	765	1450	275	293	737	195	35	51	24	13	30	9	1460	2760	524	558	1440	371
	Mar.	31.0	495	5040	73	1220	4430	632	376	1430	195	501	2950	169	26	50	22	36	310	8	716	2720	372	956	5630	322
	Apr.	30.0	366	2530	79	1490	3640	763	522	1130	236	515	1600	235	29	44	23	30	158	9	996	2150	450	982	3060	447
	May	31.0	499	4080	75	1300	4210	621	680	1300	192	529	2720	157	27	47	22	36	238	8	763	2480	344	1010	5190	300
	June	30.0	253	1340	51	1290	4000	611	399	1230	189	272	880	97	27	46	22	18	85	5	762	2350	360	474	1690	185
	July	31.0	481	2700	28	828	3960	387	256	1220	130	332	1340	66	24	46	21	31	161	3	488	2330	228	632	2560	126
	Aug.	31.0	169	1620	19	1150	3410	678	324	1050	210	148	1180	42	26	42	23	12	103	2	677	2010	399	309	2240	80
	Sept	30.0	440	3060	16	926	3420	512	286	1050	158	339	2030	44	24	42	22	28	196	2	546	2010	302	646	3870	87
SUMMARY		365.0	295	5040	14	1360	7600	387	418	2350	120	333	2950	36	27	71	21	22	310	2	798	4470	228	636	5630	68
1961	Oct	31.0	148	398	63	1920	4060	1260	595	1250	383	238	825	118	31	46	27	12	45	5	1132	2390	730	453	1570	224
	Nov.	30.0	315	1580	38	1260	5620	706	600	1730	218	339	1610	127	27	57	23	23	113	7	762	3310	416	631	3080	242
	Dec.	31.0	254	960	100	1860	3860	960	575	1190	290	393	1320	197	31	45	25	21	89	9	1090	2270	554	749	2510	375
1962	Jan.	31.0	81	134	28	2870	4630	2090	886	1430	645	193	353	53	38	50	33	8	14	3	1690	2730	1230	368	673	101
	Feb.	28.0	75	103	61	3130	4150	2510	967	1280	775	195	315	139	40	47	36	8	12	6	1840	2440	1480	372	600	264
	Mar.	31.0	182	513	57	2350	3520	1350	727	1090	416	357	1170	147	34	43	27	17	51	6	1390	2080	794	680	2220	281
	Apr.	30.0	343	1960	75	1660	4300	771	506	1330	238	468	2120	161	29	48	23	27	143	8	965	2530	454	892	4040	307
	May	31.0	158	718	23	1930	5630	512	598	1680	158	254	742	77	31	56	22	13	44	3	1140	3200	302	484	1410	146
	June	30.0	646	2390	72	745	2500	422	230	772	130	613	1190	120	23	35	21	41	134	7	439	1470	249	785	2260	230
	July	31.0	32	81	9	2310	4680	1180	715	1440	365	61	305	17	34	51	26	3	11	1	1360	2760	696	117	581	32
	Aug.	31.0	6	37	0.3	1870	2880	1610	579	890	496	9	64	1	31	38	29	0	3	1	1100	1700	946	16	121	1
	Sept	30.0	71	509	2	1490	3850	750	461	1190	231	88	672	7	28	45	23	5	40	1	878	2270	642	168	1280	12
SUMMARY		365.0	194	2390	0.3	1550	5620	422	479	1730	130	250	2120	1	29	57	21	15	143	1	914	3310	249	476	4040	1

MONTHLY SUMMARY OF CONTINUOUS RECORDED FLOW AND QUALITY DATA

River Basin: Arkansas Station Number: PRS 763 1975 2300.00

Stream and Location: Salt Creek of Little River near Dewright, Oklahoma
Lat. 35°03', long. 96°40', in SE¼, Sec. 27, T. 7 N., R. 6 E., at bridge on State Hwy 99, 2½ mi. south of Dewright, Seminole County, Oklahoma, and approx. 6 river miles from mouth.

Main Stream Flow: 144 cfs Range: 108-220 cfs Years: 2

Remarks: Records fair. Stratification nil. Instantaneous conductivity range 360-10,000 micromhos. The flow recurrence interval for 1961 is 1.33.

NOTES:

Equations Used to Compute Concentrations From Specific Conductance

	Number Samples	Equations	Std. Error	Correl. Coeff.
Dissolved Solids:	26	TDS = 0.5911 Sp. C.	456	0.9776
Chlorides:	69	Cl = 0.3610 Sp. C.	161	0.9914
Sulfates:	69	SO_4 = 0.0086 Sp. C.	13	0.8408

Year	Month	Number of Days of Specific Conductance Record	STREAM FLOW Cubic Feet/Second Mean	Extremes Max. Day	Extremes Min. Day	SPECIFIC CONDUCTANCE Micromhos/Centimeter @ 25° C Wt. Mean	Extremes Max. Day	Extremes Min. Day	CHLORIDES (Cl) Milligrams/Liter Wt. Mean	Extremes Max. Day	Extremes Min. Day	CHLORIDES (Cl) Tons/Day Wt. Mean	Extremes Max. Day	Extremes Min. Day	SULFATES (SO_4) Milligrams/Liter Wt. Mean	Extremes Max. Day	Extremes Min. Day	SULFATES (SO_4) Tons/Day Wt. Mean	Extremes Max. Day	Extremes Min. Day	DISSOLVED SOLIDS (103° C) Milligrams/Liter Wt. Mean	Extremes Max. Day	Extremes Min. Day	DISSOLVED SOLIDS (103° C) Tons/Day Wt. Mean	Extremes Max. Day	Extremes Min. Day
1960	July	6.5	208	2690	6	7460	9620	6340	2690	3600	1570	137	368	72	60	75	35	3	9	2	4610	5570	2360	224	635	117
	Aug	.5	75	1090	7	6600	6600	6600	2380	2380	2380	58	58	58	53	53	53	1	1	1	3900	3900	3900	95	95	95
	Sept	23.5	10	50	6	7950	15200	4900	3230	5470	1770	57	99	27	72	121	39	1	2	1	5290	8960	2900	96	161	45
SUMMARY		30.0	98	2690	6	8230	15200	4340	2350	5470	1570	74	368	27	60	121	35	1	9	1	4860	8960	2360	122	635	45
1960	Oct.	31.0	67	907	6	6830	12680	1850	1460	4300	669	262	4310	29	36	105	16	6	100	1	2390	7370	1100	429	7060	47
	Nov.	30.0	10	16	7	7970	9210	3160	2880	3320	1140	78	98	50	67	77	27	2	2	1	4710	5440	1870	127	160	82
	Dec.	31.0	131	861	7	2410	9030	786	869	3260	283	306	1440	63	20	76	7	7	33	1	1420	5340	463	500	2350	103
1961	Jan.	31.0	36	322	10	4600	10040	1210	1660	3630	436	162	377	73	39	84	10	4	9	2	2720	5930	714	265	618	119
	Feb.	28.0	28	142	15	3610	7620	2250	2030	2750	813	154	427	97	67	84	19	4	10	2	3320	4500	1330	252	700	159
	Mar.	31.0	269	3910	18	1260	7850	597	454	2830	215	329	2280	87	11	68	5	8	53	2	744	4640	353	540	3720	142
	Apr.	30.0	96	548	24	3330	6530	1520	1200	2360	568	305	811	150	28	55	13	7	19	3	1970	3860	897	499	1330	245
	May	31.0	174	2340	22	2090	6670	764	753	2610	276	352	1760	83	17	58	6	8	38	2	1230	3960	451	577	2850	136
	June	30.0	113	887	13	2270	7600	961	821	2740	347	249	1100	85	19	64	8	7	25	2	1340	4490	468	408	1800	140
	July	31.0	131	1330	9	1490	8910	700	539	3220	253	190	1010	49	12	75	6	4	23	1	882	5270	414	311	1650	79
	Aug.	31.0	73	1260	5	1490	7200	804	539	2600	290	106	986	25	12	60	7	2	26	1	882	4260	475	173	1610	40
	Sept	30.0	165	2080	9	1430	6140	550	517	2220	199	230	1350	55	12	52	5	5	31	1	847	3630	325	377	2210	89
SUMMARY		365.0	108	3910	4	2150	12680	550	777	4580	199	227	4310	25	18	105	5	5	100	1	1273	7370	325	371	7060	40
1962	Oct.																									
	Nov.																									
	Dec.																									
1962	Jan.																									
	Feb.																									
	Mar.																									
	Apr.																									
	May																									
	June																									
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	Aug.																									
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SUMMARY																										

MONTHLY SUMMARY OF CONTINUOUS RECORDED FLOW AND QUALITY DATA

River Basin: Arkansas Station Numbers: PAS 366 USGS 2305.00

Stream and location: Little River near Tecumseh, Oklahoma
Lat. 35°10'25", long. 96°55'55", near NW corner Sec. 16, T.8 N., R.4 E., at bridge on State Hwy 18, 5 mi. south of Tecumseh, Pottawatomie County, Okla., and 77.2 river mi. above mouth.

Yrs. Stream Flow: 163 Yrs. Range: 35-449 Years: 18

Remarks: Records very good. Occasional minor stratification. Instantaneous conductivity range 80-1340 micromhos. The flow recurrence interval for water year 1961 is 1.9.

Equations Used to Compute Concentrations From Specific Conductance

	Number Samples	Equations	Std. Error	Correl. Coeff.
Dissolved Solids	32	TDS = 0.5700 Sp. C.	41	0.9529
Chlorides	67	Cl = 0.1420 Sp. C.	23	0.8885
Sulfates	66	SO_4 = 0.0466 Sp. C.	6	0.7930

SOILES

Year	Month	Number of Days of Specific Conductance Record	STREAM FLOW, Cubic Feet/Second: Mean	Extremes: Max. Day	Extremes: Min. Day	SPECIFIC CONDUCTANCE, Micromhos/Centimeter @ 25° C: Wt. Mean	Extremes: Max. Day	Extremes: Min. Day	CHLORIDES (Cl), Milligrams/Liter: Wt. Mean	Extremes: Max. Day	Extremes: Min. Day	CHLORIDES (Cl), Tons/Day: Wt. Mean	Extremes: Max. Day	Extremes: Min. Day	SULFATES (SO_4), Milligrams/Liter: Wt. Mean	Extremes: Max. Day	Extremes: Min. Day	SULFATES (SO_4), Tons/Day: Wt. Mean	Extremes: Max. Day	Extremes: Min. Day	DISSOLVED SOLIDS (105° C), Milligrams/Liter: Wt. Mean	Extremes: Max. Day	Extremes: Min. Day	DISSOLVED SOLIDS (105° C), Tons/Day: Wt. Mean	Extremes: Max. Day	Extremes: Min. Day
1960	July	31.0	404	7100	10	283	1310	122	29	186	17	35	331	5	9	56	5	11	100	2	115	747	69	141	1327	20
	Aug.	31.0	236	3700	8	213	1030	121	30	146	17	19	171	3	9	44	5	6	52	1	121	584	69	77	667	13
	Sept.	30.0	31	37	14	1060	1250	829	147	177	118	9	13	7	45	54	36	3	4	2	991	710	672	34	53	26
SUMMARY		92.0	237	7100	8	232	1310	121	33	186	17	21	331	3	11	56	5	7	100	1	132	747	69	85	1327	13
1960	Oct.	31.0	59	916	18	495	1290	258	70	183	37	14	90	8	23	60	12	5	27	2	282	733	147	57	363	32
	Nov.	30.0	31	59	25	896	1030	617	127	146	88	11	18	9	42	48	29	3	6	3	511	584	351	43	73	38
	Dec.	31.0	104	484	24	560	1010	366	84	143	49	23	65	10	27	47	16	8	20	3	336	574	197	93	262	39
1961	Jan.	31.0	53	147	32	850	1110	564	122	157	80	18	40	12	40	52	26	6	12	4	489	631	321	70	162	49
	Feb.	28.0	116	698	42	606	958	300	86	136	43	27	80	15	28	45	14	9	24	5	345	544	171	108	322	60
	Mar.	31.0	138	1310	44	529	938	270	75	133	39	28	139	15	25	44	13	9	42	5	301	535	157	113	556	62
	Apr.	30.0	104	297	40	731	954	484	104	135	66	30	58	15	36	44	22	10	18	6	417	544	264	118	234	59
	May	31.0	193	1280	35	439	970	228	62	139	32	32	144	13	20	44	11	10	44	4	250	557	130	130	586	51
	June																									
	July																									
	Aug.																									
	Sept.																									
SUMMARY		243.0	104	1310	18	582	1290	228	93	183	32	23	144	8	27	60	11	8	44	2	332	733	130	93	586	32
1961	Oct.																									
	Nov.																									
	Dec.																									
1962	Jan.																									
	Feb.																									
	Mar.																									
	Apr.																									
	May																									
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SUMMARY																										

MONTHLY SUMMARY OF CONTINUOUS RECORDED FLOW AND QUALITY DATA

River Basin: Arkansas **Station Numbers:** PHS: [illegible] USGS: [illegible]

Stream and Location: Canadian River at Purcell, Oklahoma
Lat. 35°00'50", Long. 97°20'50", SW¼ Sec. [illegible], T. [illegible] N., R. [illegible] W., at bridge on U. S. Hwy 77, ½ mi. east of Purcell, McClain County, Oklahoma and at river mile 186.9.

Mean Stream Flow 1105 cfs; **Range:** None **Years:** 1

NOTES:

Equations Used to Compute Concentrations From Specific Conductance

	Number Samples	Equations	Std. Error	Correl. Coeff.
Dissolved Solids:	36	TDS = 0.6742 Sp. C.	91	0.9511
Chlorides:	67	Cl = 0.1529 Sp. C.	38	0.8941
Sulfates:	66	SO_4 = 0.2166 Sp. C.	50	0.8204

Remarks: Records poor. Occasional minor stratification. Instantaneous conductivity range 80-2100 micromhos. The flow recurrence intervals for water years 1961 and 1962 not available.

Year	Month	Number of Days of Specific Conductance Record	Stream Flow, Cubic Feet/Second: Mean	Extremes: Max. Day	Extremes: Min. Day	Specific Conductance, Micromhos/Centimeter @ 25° C: Wt. Mean	Extremes: Max. Day	Extremes: Min. Day	Chlorides (Cl), Milligrams/Liter: Wt. Mean	Extremes: Max. Day	Extremes: Min. Day	Chlorides, Tons/Day: Wt. Mean	Extremes: Max. Day	Extremes: Min. Day	Sulfates (SO_4), Milligrams/Liter: Wt. Mean	Extremes: Max. Day	Extremes: Min. Day	Sulfates, Tons/Day: Wt. Mean	Extremes: Max. Day	Extremes: Min. Day	Dissolved Solids (103° C), Milligrams/Liter: Wt. Mean	Extremes: Max. Day	Extremes: Min. Day	Dissolved Solids, Tons/Day: Wt. Mean	Extremes: Max. Day	Extremes: Min. Day
1960	July	10.9	3910	24000	20	1140	1490	100	176	227	15	2810	11600	27	247	322	22	1980	16500	39	768	1000	68	12400	51300	120
	Aug.	21.2	1690	6960	112	1140	1720	359	178	253	55	1070	4830	25	252	373	78	1520	6460	36	786	1160	243	4720	21300	111
	Sept	17.7	377	3310	6	800	1260	374	122	193	57	32	166	2	174	276	81	45	235	3	541	856	253	141	733	11
SUMMARY		50.0	1990	24000	6	1140	1720	100	176	263	15	1320	11600	2	247	373	22	1870	16500	3	770	1160	68	[illegible]	51300	11
1960	Oct.	31.0	1980	11700	21	732	1400	525	112	214	80	597	2080	11	159	304	114	867	2910	16	495	947	355	2640	9240	49
	Nov.	30.0	155	280	86	1360	1640	926	208	265	162	87	136	56	295	367	201	123	190	79	822	1080	626	385	592	245
	Dec.	31.0	876	2090	70	1560	1780	921	239	270	161	563	1500	62	338	382	200	798	2130	60	1060	1190	623	2500	6620	187
1961	Jan.	31.0	606	1800	96	1660	2000	1450	256	306	222	276	1130	80	360	436	316	392	1610	113	1120	1350	979	1220	5000	352
	Feb.	28.0	463	1100	177	1680	1850	1390	257	282	213	320	768	102	365	400	302	455	1090	144	1140	1250	940	1620	3390	468
	Mar.	31.0	620	1930	114	1760	2050	975	270	316	149	457	1470	85	382	445	211	667	2080	121	1190	1390	659	2020	6480	377
	Apr.	30.0	471	2310	23	1560	1900	1100	239	291	168	303	1530	13	338	412	230	429	2160	18	1060	1280	744	1340	6740	57
	May	31.0	207	1990	5	1370	1880	550	209	287	85	167	1260	2	296	408	121	237	1770	2	924	1270	377	739	5500	7
	June																									
	July																									
	Aug.																									
	Sept																									
SUMMARY		243.0	659	11700	5	1270	2050	525	196	316	80	347	2080	2	275	445	114	492	2970	2	857	1390	355	1330	9240	7
1961	Oct.																									
	Nov.																									
	Dec.																									
1962	Jan.																									
	Feb.																									
	Mar.																									
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	June																									
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SUMMARY																										

MONTHLY SUMMARY OF CONTINUOUS RECORDED FLOW AND QUALITY Data

River Basin: Arkansas Station Number: PRS 304 USGS 2285 00

Stream and Location: Canadian River at Bridgeport Oklahoma
Lat. 35°34'00", Long. 98°22'..", NW¼SW¼, Sec. 28, T.13 N., R.11 W., at CR160 Rd Co. bridge, 1 mile south of Bridgeport, Caddo County, Okla., and at river mile 267.0.

Main Stream Flow 304 cfs; Range: 107-1150 cfs; Years: 10

Remarks: Records poor. Occasional minor stratification. Instantaneous conductivity range 10-3080 micrombos. The flow recurrence intervals for water years 1961 and 1962 are 2.4 and 2.12 respectively.

Equations Used to Compute Concentrations From Specific Conductance

Dissolved	Number Samples	Equations	Std. Error	Correl. Coeff.
Solids:	24	TDS = 0.693 Sp. C.	144.	0.8213
Chlorides:	184	Log Cl = 2.2876 Log Sp. C. - 5.1602	0.2534	0.7887
Sulfates:	157	SO_4 = 0.1769 Sp. C. + 126	116.	0.5840

Year	Month	Number of Days of Specific Conductance Record	STREAM FLOW Cubic Feet/Second Mean	Extremes Max. Day	Extremes Min. Day	SPECIFIC CONDUCTANCE Micrombos/Centimeter at 25° C Wt. Mean	Extremes Max. Day	Extremes Min. Day	CHLORIDES (Cl) Milligrams/Liter Wt. Mean	Extremes Max. Day	Extremes Min. Day	CHLORIDES (Cl) Tons/Day Wt. Mean	Extremes Max. Day	Extremes Min. Day	SULFATES (SO_4) Milligrams/Liter Wt. Mean	Extremes Max. Day	Extremes Min. Day	SULFATES (SO_4) Tons/Day Wt. Mean	Extremes Max. Day	Extremes Min. Day	DISSOLVED SOLIDS (105° C) Milligrams/Liter Wt. Mean	Extremes Max. Day	Extremes Min. Day	DISSOLVED SOLIDS (105° C) Tons/Day Wt. Mean	Extremes Max. Day	Extremes Min. Day
1960	Oct.	0.0	6480	25100	27	0	0	0	0	0	0	0	0	-	0	0	0	0	0	0	0	0	0	0	0	0
	Nov.	5.1	1180	9290	30	1320	1510	854	112	169	60	920	5530	73	367	470	237	3010	15600	431	809	1020	575	7290	37700	1050
	Dec.	0.0	681	6000	12	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	[illegible]	5.0	2020	25500	12	1270	1510	850	109	169	60	920	5530	73	355	470	237	3010	15600	431	860	1020	575	7290	37700	1050
1961	Oct.	31.0	2160	13900	70	1300	1700	1023	88	195	61	503	4160	5	337	426	207	1950	13970	100	807	1150	690	4670	36670	232
	Nov.	30.0	130	184	90	1675	1880	1600	108	230	125	66	85	33	422	450	374	168	160	99	1130	1270	950	398	440	250
	Dec.	31.0	289	703	71	1860	2250	1680	260	375	167	187	693	53	455	524	409	355	949	116	1260	1520	1080	981	2610	312
1962	Jan.	31.0	182	270	92	1990	2350	1750	270	415	196	136	213	50	477	562	427	234	352	126	1364	1590	1150	659	986	316
	Feb.	28.0	351	2030	71	1580	1930	1050	166	262	66	136	906	30	408	468	312	377	2230	87	1070	1310	710	995	5850	232
	Mar.	31.0	515	1950	170	1860	2180	1330	234	320	111	326	1490	60	431	497	361	625	2510	186	1260	1420	899	1725	7050	679
	Apr.	30.0	309	1180	27	1670	1900	1330	167	253	109	136	360	10	421	462	362	350	1380	30	1130	1280	901	939	3350	73
	May	31.0	255	1030	17	1570	2060	871	161	339	46	111	1260	4	404	597	280	270	2570	15	1060	1800	589	731	6230	37
	June	30.0	953	4310	15	991	1470	515	57	160	13	149	9200	3	301	386	217	773	3860	15	670	984	368	1720	9860	27
	July	31.0	260	1710	16	1650	2200	1060	101	355	66	121	1590	5	417	515	316	279	2790	16	1112	1690	716	763	6770	99
	Aug.	31.0	102	1620	11	1790	2150	710	103	338	23	51	284	6	353	388	252	173	1321	12	869	1450	480	427	2960	33
	Sept	30.0	373	3060	12	700	1960	619	34	206	8	34	180	1	206	469	200	267	1070	9	534	1310	283	537	2580	22
	[illegible]	365.0	494	13900	11	1350	2060	619	134	339	8	152	9200	1	366	597	200	686	15970	9	911	1800	283	1220	36670	22
1963	Oct.	31.0	259	3890	60	2.0	1800	384	291	326	6	203	136	7	237	466	194	180	1190	35	500	1220	259	369	2400	80
	Nov.	30.0	1160	16050	178	1160	2230	610	70	362	19	267	1310	11	328	520	234	1025	7360	101	774	1510	412	2620	17860	263
	Dec.	31.0	386	864	163	1860	2130	1610	230	328	172	196	515	108	436	502	411	375	1150	230	1260	1640	1090	1060	2780	550
1964	Jan.	31.0	160	976	69	1900	2640	1500	222	467	147	96	536	23	463	557	391	190	1270	55	1210	1650	1010	522	3070	147
	Feb.	28.0	99	363	68	1820	2030	1550	228	292	159	62	209	40	448	484	401	120	486	92	1230	1370	1050	329	1130	222
	Mar.	31.0	31	65	20	1660	1890	1460	185	230	134	25	44	12	420	460	381	57	92	33	1130	1280	972	133	224	79
	Apr.	30.0	125	282	26	1850	2070	1200	236	269	84	80	337	10	433	836	338	153	680	29	1250	1960	812	421	1160	71
	May	31.0	72	883	20	1100	2100	782	84	317	32	16	120	5	336	497	206	64	487	19	794	1420	533	154	1180	63
	June	30.0	837	8890	28	723	1900	236	28	253	2	60	430	2	236	462	180	621	1710	16	689	1280	169	1200	4160	38
	July	31.0	117	1230	13	1550	2080	270	80	287	3	25	363	2	360	660	175	104	1180	23	780	1350	188	247	2900	16
	Aug.	31.0	1790	16660	15	1510	1950	979	169	270	55	717	5060	3	393	471	299	1090	13470	13	1020	1320	661	4920	40160	28
	Sept	30.0	360	7290	19	937	1500	296	50	167	6	97	805	1	282	391	178	447	6480	11	834	1010	199	971	10670	27
	[illegible]	365.0	440	16050	11	1250	2070	250	96	469	2	121	5060	1	367	836	175	638	15470	11	865	1960	199	1060	40160	16

MONTHLY SUMMARY OF CONTINUOUS RECORDED FLOW AND QUALITY DATA

River Basin: Arkansas Station Numbers: PHS: 961 USGS: 2280.00

Stream and Location: Canadian River near Canadian, Texas
Lat. 35°55', long. 100°22', at bridge on U. S. Hwy 60, 1.6 miles NE of Canadian, Hemphill County, Texas, and at river mile 433.9.

Main Stream Flow: 590 cfs Range: 64-2960 cfs Years: 24

Equations Used to Compute Concentrations From Specific Conductance

	Number Samples	Equations	Std. Error	Correl. Coeff.
Dissolved Solids:	24	DS = 0.6167 Sp. C.	76	0.9857
Chlorides:	140	Log Cl = 1.4635 Log Sp. C. -2.1943	0.0589	0.9746
Sulfates:	139	SO_4 = 0.1275 Sp.C.	57	0.8199

Remarks: Records poor. Occasional minor stratification. Instantaneous conductivity range 20-8600 micromhos. Flow recurrence intervals for water years 1961 and 1962 are 1.78 and 1.37 respectively.

Year	Month	Number of Days of Specific Conductance Record	STREAM FLOW Cubic Feet/Second			SPECIFIC CONDUCTANCE Micromhos/Centimeter @ 25° C			CHLORIDES (Cl) Milligrams/Liter			CHLORIDES (Cl) Tons/Day			SULFATES (SO_4) Milligrams/Liter			SULFATES (SO_4) Tons/Day			DISSOLVED SOLIDS (103° C) Milligrams/Liter			DISSOLVED SOLIDS (103° C) Tons/Day		
			Mean	Extremes Max. Day	Extremes Min. Day	Wt. Mean	Extremes Max. Day	Extremes Min. Day	Wt. Mean	Extremes Max. Day	Extremes Min. Day	Wt. Mean	Extremes Max. Day	Extremes Min. Day	Wt. Mean	Extremes Max. Day	Extremes Min. Day	Wt. Mean	Extremes Max. Day	Extremes Min. Day	Wt. Mean	Extremes Max. Day	Extremes Min. Day	Wt. Mean	Extremes Max. Day	Extremes Min. Day
1960	July	19.7	3660	22600	4	921	2680	789	141	663	112	1801	8060	102	117	341	100	1500	6710	89	568	1660	487	7290	32600	431
	Aug.	10.1	1770	14100	24	819	2400	714	122	562	96	360	2710	36	104	304	91	308	2560	19	505	1480	440	1490	12400	94
	Sept	30.0	486	2910	2	1370	2730	823	256	679	121	335	1920	2	174	346	105	228	1170	1	847	1680	508	1110	5660	5
	SUMMARY	60.0	1970	22600	2	963	2730	714	152	679	96	822	8060	2	122	346	91	661	6710	1	594	1680	440	3210	32600	5
1960	Oct.	31.0	1310	10980	96	825	2120	500	119	470	57	419	1900	86	105	269	64	369	2050	61	509	1310	308	1790	9910	297
	Nov.	30.0	72	156	33	2040	2620	1570	447	640	304	86	177	30	260	333	200	50	96	20	1260	1620	970	243	467	95
	Dec.	31.0	154	435	46	2450	2610	2022	582	636	443	242	611	66	312	331	258	129	319	38	1510	1610	1250	627	1550	182
1961	Jan.	31.0	71	216	13	2290	2830	2176	528	717	490	101	303	20	292	359	277	56	168	11	1410	1750	1340	270	817	53
	Feb.	28.0	122	486	16	1730	2280	1072	350	523	175	115	474	23	220	290	137	72	288	13	1070	1410	661	351	1400	61
	Mar.	31.0	583	1930	136	1790	2200	1200	367	497	205	577	1220	159	228	280	153	358	810	93	1100	1360	740	1730	3890	434
	Apr.	30.0	195	1230	33	2080	2900	1350	458	745	245	241	937	63	265	370	172	139	628	32	1280	1790	834	673	3050	155
	May	31.0	96	1410	0	1490	3000	--	282	784	--	73	648	0	190	382	--	49	511	0	919	1850	--	237	2470	0
	June	30.0	469	4750	0	835	2850	--	121	722	--	153	745	0	106	363	--	134	775	0	515	1760	--	651	3730	0
	July	31.0	458	4550	0	1500	4130	--	284	1250	--	350	3880	0	191	525	--	236	2430	0	925	2550	--	1140	11800	0
	Aug.	31.0	180	1950	0	1490	2150	--	281	480	--	136	1570	0	190	274	--	92	1040	0	918	1330	--	445	5030	0
	Sept	30.0	241	693	0	1680	2850	--	336	725	--	218	727	0	214	362	--	139	427	0	1040	1760	--	672	2080	0
	SUMMARY	365.0	329	10980	0	1340	4130	500	242	1250	57	216	3880	0	171	525	64	153	2430	0	829	2550	308	740	11800	0
1961	Oct.	31.0	31	154	0	1820	2400	--	378	562	--	31	140	0	232	304	--	19	88	0	1120	1480	--	92	427	0
	Nov.	30.0	205	779	12	2170	2830	1570	489	718	303	271	858	17	277	360	200	153	513	10	1340	1750	969	742	2490	46
	Dec.	31.0	303	1420	33	2250	2630	1660	514	644	330	420	1930	56	286	334	211	234	1080	29	1390	1620	1020	1130	5240	142
1962	Jan.	31.0	178	977	33	2090	3680	1300	462	1050	230	221	819	84	267	468	165	128	472	38	1290	2270	802	617	2300	187
	Feb.	28.0	104	258	15	2470	2980	2200	589	775	497	165	411	26	315	379	280	88	219	13	1520	1860	1360	427	1060	65
	Mar.	31.0	15	53	0	2480	3600	--	595	1020	--	24	72	0	317	457	--	13	40	0	1530	2220	--	62	195	0
	Apr.	30.0	93	590	0	2850	3620	--	728	1030	--	183	1050	0	364	460	--	91	539	0	1760	2230	--	442	2620	0
	May	31.0	0	8	0	2220	2230	--	504	505	--	0	13	0	283	283	--	0	7	0	1370	1370	--	1	36	0
	June	30.0	113	927	0	3010	4000	--	788	1200	--	237	3000	0	384	509	--	116	1270	0	1860	2470	--	559	6170	0
	July	31.0	315	2900	0	1820	3200	--	377	858	--	319	3180	0	232	408	--	197	2000	0	1120	1970	--	951	9650	0
	Aug.	31.0	983	16600	0.4	787	2700	300	111	670	27	304	2480	0	100	344	38	265	2240	0	485	1670	185	1280	10850	0
	Sept	30.0	57	581	0.3	1570	2820	500	304	717	54	47	89	0	200	358	64	31	100	0	968	1740	308	150	484	0
	SUMMARY	365.0	200	16600	0	1410	4000	300	314	1200	27	170	3380	0	205	509	38	111	2240	0	990	2470	185	537	10850	0

MONTHLY SUMMARY OF CONTINUOUS RECORDED FLOW AND QUALITY DATA

River Basin: Arkansas

Station Numbers: PHS: 362 USGS: 2275.00

Stream and Location: Canadian River near Amarillo, Texas
Lat. 35°28'10", long. 101°52'45", at bridge on U. S. Hwy 87 and 287, 19 miles north of Amarillo, Potter County, Texas, and at river mile 537.7.

Main Stream Flow: 463 cfs: Range: 92-2350 cfs Years: 24

NOTES:

Equations Used to Compute Concentrations From Specific Conductance

	Number Samples	Equations	Std. Error	Correl. Coeff.
Dissolved Solids:	24	TDS = 0.6368 Sp.C.	67.	0.9846
Chlorides:	54	Log Cl = 1.4660 Log Sp.C. - 2.2868	0.0749	0.9706
Sulfates:	53	SO_4 = 0.1819 Sp.C.	50.	0.9306

Remarks: Records poor. Occasional minor stratification. Instantaneous conductivity range 220-3270 micromhos. Flow recurrence interval for water year 1961 is 1.92.

Year	Month	Number of Days of Specific Conductance Record	STREAM FLOW Cubic Feet/Second			SPECIFIC CONDUCTANCE Micromhos/Centimeter @ 25° C			CHLORIDES (Cl) Milligrams/Liter			CHLORIDES (Cl) Tons/Day			SULFATES (SO_4) Milligrams/Liter			SULFATES (SO_4) Tons/Day			DISSOLVED SOLIDS (103° C) Milligrams/Liter			DISSOLVED SOLIDS (103° C) Tons/Day		
			Mean	Extremes Max. Day	Extremes Min. Day	Wt. Mean	Extremes Max. Day	Extremes Min. Day	Wt. Mean	Extremes Max. Day	Extremes Min. Day	Wt. Mean	Extremes Max. Day	Extremes Min. Day	Wt. Mean	Extremes Max. Day	Extremes Min. Day	Wt. Mean	Extremes Max. Day	Extremes Min. Day	Wt. Mean	Extremes Max. Day	Extremes Min. Day	Wt. Mean	Extremes Max. Day	Extremes Min. Day
1960	July	17.0	3290	24400	7	573	1880	330	62	325	26	257	1300	4	104	341	60	434	2570	5	365	1200	210	1520	8990	17
	Aug.	24.9	755	11000	46	563	2630	320	65	532	24	153	1020	8	103	478	58	243	2170	18	359	1670	204	850	7610	64
	Sept	30.0	395	2530	34	957	3220	332	132	716	26	140	561	11	174	585	61	185	686	26	609	2050	212	649	2400	90
SUMMARY		72.0	1480	24400	7	653	3220	320	77	716	24	172	1300	4	119	585	58	264	2570	5	416	2050	204	924	8990	17
1960	Oct.	31.0	784	9960	49	757	2450	500	86	480	47	182	2450	58	138	446	91	291	3290	60	482	1560	318	1020	11500	211
	Nov.	30.0	54	113	34	2190	2450	1800	409	481	305	60	93	42	399	446	327	58	100	40	1400	1560	1150	203	349	139
	Dec.	31.0	181	451	36	1910	2440	1660	335	478	271	163	422	46	348	444	301	169	434	43	1220	1550	1050	592	1520	150
1961	Jan.	31.0	67	109	32	2176	2650	2000	405	540	357	73	106	46	396	483	364	71	108	42	1390	1690	1270	249	377	145
	Feb.	28.0	187	566	27	1530	2430	1160	240	474	160	121	306	25	278	442	211	140	366	26	972	1550	737	491	1280	91
	Mar.	31.0	404	945	151	1320	1600	960	193	258	121	210	1030	371	239	291	175	260	580	130	838	1020	611	912	2030	456
	Apr.																									
	May																									
	June																									
	July																									
	Aug.																									
	Sept																									
SUMMARY		182.0	279	9960	27	1290	2650	500	169	540	47	128	2450	25	218	483	91	166	3290	26	762	1690	318	579	11500	91
1961	Oct.																									
	Nov.																									
	Dec.																									
1962	Jan.																									
	Feb.																									
	Mar.																									
	Apr.																									
	May																									
	June																									
	July																									
	Aug.																									
	Sept																									
SUMMARY																										

MONTHLY SUMMARY OF CONTINUOUS RECORDED FLOW AND QUALITY DATA

River Basin: Arkansas Station Numbers: PMS: 361 USGS: 2270.00

Stream and Location: Canadian River at Logan, New Mexico
Lat. 35°21'20", long. 103°25'20", NE-1/4, Sec. 15, T.13 N., R.33 E., 1 1/2 miles upstream from CRI&P RR bridge, 0.5 mile south of Logan, Quay County, N. Mex., and at river mile 668.5.

Main Stream Flow: 308 cfs; Range: 23-1820 cfs; Years: 34

NOTES:

Equations Used to Compute Concentrations From Specific Conductance

	Number Samples	Equations	Std. Error	Correl. Coeff.
Dissolved Solids:	25	TDS = 0.6586 Sp. C	183	0.9830
Chlorides:	56	Log Cl = 1.5979 Log Sp. C. - 2.7909	0.1148	0.9723
Sulfates:	55	SO_4 = 0.2003 Sp. C.	110.	0.8605

Remarks: Records poor. Stratification nil. Instantaneous conductivity range 70-4600 micromhos.

Year	Month	Number of Days of Specific Conductance Record	STREAM FLOW Cubic Feet/Second Mean	Extremes Max. Day	Extremes Min. Day	SPECIFIC CONDUCTANCE Micromhos/Centimeter @ 25° C Wt. Mean	Extremes Max. Day	Extremes Min. Day	CHLORIDES (Cl) Milligrams/Liter Wt. Mean	Extremes Max. Day	Extremes Min. Day	Tons/Day Wt. Mean	Extremes Max. Day	Extremes Min. Day	SULFATES (SO_4) Milligrams/Liter Wt. Mean	Extremes Max. Day	Extremes Min. Day	Tons/Day Wt. Mean	Extremes Max. Day	Extremes Min. Day	DISSOLVED SOLIDS (103° C) Milligrams/Liter Wt. Mean	Extremes Max. Day	Extremes Min. Day	Tons/Day Wt. Mean	Extremes Max. Day	Extremes Min. Day
1960	July	29.9	1220	12600	14	425	2880	288	32	547	14	107	468	10	85	576	58	288	1950	19	280	1900	190	948	6410	63
	Aug.	17.7	360	6800	9	695	4430	408	82	1090	27	97	907	19	139	885	82	163	2250	18	458	2920	269	538	7410	59
	Sept	30.0	47	191	14	1290	2580	768	168	460	69	21	46	9	258	515	154	33	79	17	851	1700	506	108	261	54
SUMMARY		78.0	541	12600	9	498	4430	288	44	1090	14	71	907	9	100	885	58	161	2250	17	328	2920	190	530	7410	54
1960	Oct.	31.0	381	5120	11	493	2610	315	32	411	16	33	318	9	99	481	63	102	1090	12	325	1580	207	334	3600	41
	Nov.	30.0	26	37	21	2600	2910	1990	462	557	305	32	40	28	520	583	398	36	45	30	1710	1920	1312	118	149	99
	Dec.	31.0	84	147	30	1320	2330	1060	156	388	111	35	44	25	264	465	212	60	84	33	867	1530	699	196	277	109
1961	Jan.	31.0	57	80	42	1480	1750	1200	188	246	134	29	36	27	297	350	239	46	58	39	975	1150	787	151	191	129
	Feb.	28.0	284	740	66	889	1560	720	83	201	60	63	123	34	178	309	144	136	293	52	585	1020	475	447	966	172
	Mar.	31.0	187	396	105	991	1320	761	99	157	65	50	69	33	198	264	152	100	162	68	653	869	502	329	534	225
	Apr.																									
	May																									
	June																									
	July																									
	Aug.																									
	Sept																									
SUMMARY		182.0	170	5120	11	867	2910	315	80	557	16	36	318	9	174	583	63	79	1090	12	571	1920	207	260	3600	41
1961	Oct.																									
	Nov.																									
	Dec.																									
1962	Jan.																									
	Feb.																									
	Mar.																									
	Apr.																									
	May																									
	June																									
	July																									
	Aug.																									
	Sept																									
SUMMARY																										

MONTHLY SUMMARY OF CONTINUOUS RECORDED FLOW AND QUALITY DATA

River Basin: Arkansas Station Numbers: PHS: 283 USGS: 1786.00

Stream and location: Verdigris River near Inola, Oklahoma
Lat. 36°10', long. 95°37', near NW corner, Sec. 4,T.19 N., R. 16 E., at bridge on State Hwy 33, 6 miles west of Inola, Rogers County, Okla., and at 48.8 river mi. above mouth.

Main Stream Flow: 4490 cfs; Range: 297-9380 cfs Years: 18

NOTES:

Equations Used to Compute Concentrations From Specific Conductance

	Number Samples	Equations	Std. Error	Correl. Coeff.
Dissolved Solids:	26	DS = 0.5928 Sp. C.		
Chlorides:	142	Log Cl = 1.1843 Log Sp. C. - 1.3380	.47	0.9229
Sulfates:	142	SO_4 = 0.0101 Sp. C. + 33	0.1625	0.8959
			.15	0.4707

Remarks: Records good. Occasional minor stratification. Instantaneous conductivity range 130-2300 micromhos. The flow recurrence intervals for water years 1961 and 1962 are 36.00 and 2.77 respectively.

Year	Month	Number of Days of Specific Conductance Record	STREAM FLOW Cubic Feet/Second			SPECIFIC CONDUCTANCE Micromhos/Centimeter @ 25° C			CHLORIDES (Cl) Milligrams/Liter			CHLORIDES (Cl) Tons/Day			SULFATES (SO_4) Milligrams/Liter			SULFATES (SO_4) Tons/Day			DISSOLVED SOLIDS (103° C) Milligrams/Liter			DISSOLVED SOLIDS (103° C) Tons/Day		
				Extremes			Extremes			Extremes			Extremes			Extremes			Extremes			Extremes			Extremes	
			Mean	Max. Day	Min. Day	Wt. Mean	Max. Day	Min. Day	Wt. Mean	Max. Day	Min. Day	Wt. Mean	Max. Day	Min. Day	Wt. Mean	Max. Day	Min. Day	Wt. Mean	Max. Day	Min. Day	Wt. Mean	Max. Day	Min. Day	Wt. Mean	Max. Day	Min. Day
1960	July	24.8	1170	5160	182	525	901	330	77	145	44	284	876	71	38	42	36	140	519	21	312	534	196	1150	3680	262
	Aug.	31.0	1440	5670	158	612	1310	327	93	226	44	360	1320	65	39	46	36	152	572	18	363	779	194	1410	5240	238
	Sept	30.0	319	1300	93	504	886	361	73	142	49	63	233	30	38	42	37	33	128	10	299	526	214	257	956	120
SUMMARY		86.0	979	5670	93	566	1310	327	84	226	44	234	1320	30	39	46	36	107	572	10	336	779	194	932	5240	120
1960	Oct.	31.0	699	6920	78	626	1040	516	95	172	75	179	1400	32	39	43	38	73	709	9	371	617	306	699	5700	116
	Nov.	30.0	2210	11300	207	462	761	364	66	119	49	393	1810	50	38	41	37	226	1130	22	274	451	216	1630	7690	198
	Dec.	31.0	2780	13960	256	472	934	334	68	151	45	510	2550	61	38	42	36	285	1380	27	280	554	198	2100	10510	246
1961	Jan.	31.0	572	1090	295	793	955	673	125	155	102	192	342	116	41	42	40	63	118	33	470	566	399	724	1310	427
	Feb.	28.0	1900	6410	250	741	1040	640	115	172	97	587	1870	103	40	43	39	204	689	29	439	617	379	2240	7220	377
	Mar.	31.0	4800	12530	940	557	754	375	82	117	51	1060	2980	200	39	40	37	504	1280	97	330	447	222	4270	11810	824
	Apr.	30.0	9630	17410	3360	438	605	274	62	90	35	1610	2420	717	37	39	36	960	1710	346	260	359	162	6740	10330	2910
	May	31.0	41690	113900	8310	225	437	150	28	61	17	3150	5320	1380	35	37	34	3930	10540	833	133	259	89	14940	27310	5800
	June	30.0	8460	19060	685	356	650	244	48	98	31	1090	2200	179	37	39	35	844	1850	73	211	386	145	4810	9740	704
	July	31.0	8830	38450	424	271	759	163	36	119	19	856	2140	108	36	40	35	856	3580	45	161	450	97	3830	10300	427
	Aug.	31.0	6520	39030	463	275	625	159	37	94	19	650	2000	115	36	39	35	632	3620	49	163	371	94	2860	9890	459
	Sept	30.0	24050	43000	558	216	668	150	27	101	17	1750	2620	152	35	40	34	2270	4020	59	128	396	89	8300	12860	595
SUMMARY		365.0	9340	113900	78	294	1040	150	39	172	17	986	5320	32	36	43	34	911	10540	9	174	617	89	4400	27310	116
1961	Oct.	31.0	9670	20780	1440	303	666	276	40	101	36	1040	2580	372	36	40	36	938	2010	153	180	395	164	4690	10990	1500
	Nov.	30.0	19970	32000	9500	381	550	207	52	80	25	2800	5660	1900	37	38	35	1992	3110	974	226	326	123	12170	23260	7743
	Dec.	31.0	8720	19550	2820	650	700	440	98	107	62	2300	3430	816	40	40	37	940	1950	303	385	415	261	9050	14200	3160
1962	Jan.	31.0	3380	13380	1490	736	921	472	114	149	67	1040	3590	533	40	42	38	364	1360	165	436	546	280	3970	13760	2000
	Feb.	28.0	4490	8740	2190	685	907	473	105	146	68	1270	2640	682	40	42	38	484	944	239	406	538	281	4920	10130	2640
	Mar.	31.0	4880	19230	1090	651	940	463	99	152	66	1300	3410	391	40	42	38	525	1940	121	386	557	274	5070	14220	1460
	Apr.	30.0	3020	11920	1210	658	862	451	100	137	64	815	2310	388	40	42	37	326	1220	133	390	511	268	3180	9500	1480
	May	31.0	728	4630	171	805	1020	714	127	167	110	249	1590	74	41	43	40	80	511	20	477	604	423	936	6000	270
	June	30.0	3490	13000	387	595	1011	429	89	166	60	838	2840	168	39	43	37	367	1340	45	353	600	255	3320	11430	625
	July	31.0	753	2380	165	670	824	600	102	130	89	207	607	54	40	41	39	81	251	18	397	489	356	806	2390	203
	Aug.	31.0	163	676	46	893	1224	672	144	208	102	63	197	20	42	45	40	18	73	5	529	726	399	232	760	74
	Sept	30.0	7760	27860	156	355	1395	252	49	144	32	1020	2410	74	37	47	35	773	2650	20	210	827	150	4390	11230	268
SUMMARY		365.0	5590	32000	46	492	1395	207	71	244	25	1064	5660	20	38	47	35	570	3110	5	292	827	123	4377	23260	74

MONTHLY SUMMARY OF CONTINUOUS RECORDED FLOW AND QUALITY DATA

River Basin: Arkansas Station Numbers: PMS: 770 USGS: None

Stream and Location: Arkansas River near Haskell, Oklahoma
Lat. 35°49', long. 95°38', Sec. 32, T.16 N., R.16 E., at bridge on State Hwy 104, approx. 2 mi. East of Haskell, Muskogee County, Okla., and at river mi. 483.7. (Flow computed from upstream gaging stations.)

Main Stream Flow: 6740 cfs; Range: 1280-15620 cfs Years: 37

NOTES:

Equations Used to Compute Concentrations From Specific Conductance

	Number Samples	Equations	Std. Error	Correl. Coeff.
Dissolved Solids:	25	TDS = 0.5706 Sp. C.	79.	0.9879
Chlorides:	104	Cl = 0.2838 Sp. C. - 66	26.	0.9926
Sulfates:	136	SO_4 = 0.0832 Sp. C	43.	0.7686

Remarks: Records good. Occasional major stratification. Instantaneous conductivity range 180-13000 micromhos. The flow recurrence intervals for water years 1961 and 1962 are 4.35 and 3.9 respectively. Flow gaging station located up stream from monitoring station.

Year	Month	Number of Days of Specific Conductance Record	STREAM FLOW Cubic Feet/Second			SPECIFIC CONDUCTANCE Micromhos/Centimeter @ 25° C			CHLORIDES (Cl) Milligrams/Liter			CHLORIDES (Cl) Tons/Day			SULFATES (SO_4) Milligrams/Liter			SULFATES (SO_4) Tons/Day			DISSOLVED SOLIDS (103° C) Milligrams/Liter			DISSOLVED SOLIDS (103° C) Tons/Day		
			Mean	Extremes Max. Day	Extremes Min. Day	Wt. Mean	Extremes Max. Day	Extremes Min. Day	Wt. Mean	Extremes Max. Day	Extremes Min. Day	Wt. Mean	Extremes Max. Day	Extremes Min. Day	Wt. Mean	Extremes Max. Day	Extremes Min. Day	Wt. Mean	Extremes Max. Day	Extremes Min. Day	Wt. Mean	Extremes Max. Day	Extremes Min. Day	Wt. Mean	Extremes Max. Day	Extremes Min. Day
1960	July																								
	Aug.																								
	Sept																								
SUMMARY																									
1960	Oct.																								
	Nov.																								
	Dec.																								
1961	Jan.																								
	Feb.																								
	Mar.																								
	Apr.																								
	May																								
	June																								
	July	31.0	12100	40200	2770	804	2580	343	176	691	59	5750	9930	2810	67	214	28	2180	3760	1200	467	1500	199	15200	26300	8390
	Aug.	31.0	9300	21800	3520	1360	2270	620	321	590	122	8030	18300	3410	113	188	52	2820	6430	1450	788	1320	360	19700	45000	10100
	Sept	30.0	24600	139000	5760	623	2090	251	131	533	41	8700	21100	3950	52	173	21	3430	9920	1490	362	1210	146	24000	69400	10400
SUMMARY		92.0	15300	139000	2770	811	2580	251	179	691	41	7480	21100	2810	67	214	21	2800	9920	1200	471	1500	146	19600	69400	8390
1961	Oct.	31.0	16800	85300	5040	677	1760	370	126	433	39	5710	10600	4270	55	146	31	2490	7600	1720	382	1020	215	17400	52600	12000
	Nov.	30.0	25300	107000	5310	861	2000	321	173	502	25	11800	22300	6230	70	166	27	4770	9790	2110	489	1160	187	33400	68500	14700
	Dec.	31.0	9200	13900	6630	1910	2600	1360	475	672	320	11800	16400	9440	158	216	113	3920	5350	3140	1110	1510	792	27500	37400	22000
1962	Jan.	31.0	5290	13000	3110	2380	2960	1840	609	776	456	8680	16100	4970	197	246	153	2810	5360	1620	1380	1720	1070	19700	37500	11300
	Feb.	28.0	10400	22300	6010	1590	2350	980	384	601	189	10700	13900	7520	132	195	75	3700	5050	2530	921	1370	523	25800	35300	17700
	Mar.	31.0	5550	10400	3980	2270	2800	1440	578	729	398	8640	14100	6970	189	233	136	2830	4650	2300	1370	1630	954	19700	32600	16100
	Apr.	30.0	4910	8340	3860	2120	2980	1310	535	780	306	7080	11700	4660	176	247	109	2330	3810	1630	1230	1730	763	16300	26600	11400
	May	31.0	2640	5740	1350	2710	3450	2100	702	913	530	5000	9080	2490	225	287	175	1600	2950	798	1570	2000	1220	11200	20600	5580
	June	30.0	17600	57200	4130	1130	2800	506	255	729	78	12100	37000	3660	94	232	42	4460	13900	1480	657	1630	294	31100	96800	10300
	July	31.0	9180	19200	2990	1140	3250	593	258	856	102	6400	18300	2380	95	270	49	2350	5740	1100	662	1890	345	16400	40200	7700
	Aug.	31.0	5710	13800	1950	1870	2440	991	465	626	215	7160	18900	2940	155	202	82	2390	6220	961	1090	1420	576	16700	43500	6720
	Sept	30.0	8160	22100	2890	1160	3860	419	262	1030	53	5760	23100	1800	96	320	35	2110	7250	815	671	2240	244	14800	50800	5710
SUMMARY		365.0	10000	107000	1350	1330	3860	321	311	1030	25	8390	37000	1800	110	320	27	2970	13900	798	770	2240	187	20800	96800	5580

MONTHLY SUMMARY OF CONTINUOUS RECORDED FLOW AND QUALITY DATA

River Basin: Arkansas Station Numbers: PHS: 259 USGS: 1645

Stream and Location: Arkansas River at Tulsa, Oklahoma
Lat. 36 09'40", Long. 96 00'10", in SW¼ Sec. 11, T.19N., R. 12 E., at U.S. Highway 66 in Tulsa, 10.1 miles upstream from Polecat Creek and at river mile 523.7.

Main Stream Flow: 6760 cfs; Range: 1280 - 35620 cfs Years: 37

NOTES:

Equations Used to Compute Concentrations From Specific Conductance

	Number Samples	Equations	Std. Error	Correl. Coeff.
Dissolved Solids:	25	TDS = 0.5606 Sp.C.	79.	0.9879
Chlorides:	47	Log Cl = 1.2193 Log Sp.C- 1.3199	0.0412	0.9894
Sulfates:	47	SO_4 = 0.0930 Sp.C.	13.	0.8833

Remarks: Records poor. Frequent major stratification. Instantaneous conductivity range. 290-4300 micromhos. The flow recurrence intervals for water years 1961 and 1962 are 4.35 and 3.9 respectively.

Year	Month	Number of Days of Specific Conductance Record	STREAM FLOW Cubic Feet/Second Mean	Extremes Max. Day	Extremes Min. Day	SPECIFIC CONDUCTANCE Micromhos/Centimeter @ 25° C Wt. Mean	Extremes Max. Day	Extremes Min. Day	CHLORIDES (Cl) Milligrams/Liter Wt. Mean	Extremes Max. Day	Extremes Min. Day	CHLORIDES (Cl) Tons/Day Wt. Mean	Extremes Max. Day	Extremes Min. Day	SULFATES (SO_4) Milligrams/Liter Wt. Mean	Extremes Max. Day	Extremes Min. Day	SULFATES (SO_4) Tons/Day Wt. Mean	Extremes Max. Day	Extremes Min. Day	DISSOLVED SOLIDS (103° C) Milligrams/Liter Wt. Mean	Extremes Max. Day	Extremes Min. Day	DISSOLVED SOLIDS (103° C) Tons/Day Wt. Mean	Extremes Max. Day	Extremes Min. Day
1960	July	31.0	10980	27320	3740	1180	2650	537	268	648	102	7930	16750	4020	110	227	50	3260	6510	1530	688	1420	312	20360	40600	9600
	Aug.	31.0	11860	50610	3010	897	3360	294	191	960	49	6100	13270	3310	83	313	27	2650	6080	1500	521	1950	171	16650	38230	9430
	Sept	30.0	6910	24600	2730	1280	2770	627	295	763	124	5500	9570	4050	119	258	58	2220	3850	1530	745	1610	364	13880	24180	9600
	SUMMARY	92.0	9920	50610	2730	1090	3360	294	242	960	49	6490	16750	3310	101	313	27	2710	6510	1500	633	1950	171	16970	40600	9430
1960	Oct.	31.0	6490	22060	2130	1340	2760	743	310	755	153	5420	13010	2500	124	256	69	2170	5240	1310	776	1600	431	13580	32640	8140
	Nov.	30.0	6170	23650	2930	1280	2810	520	293	770	98	4870	9000	2520	119	261	48	1980	4150	1200	741	1630	302	12310	25930	7550
	Dec.	31.0	4010	7850	2950	2440	3500	1500	667	1000	358	6990	9320	5390	227	321	140	2450	3280	2000	1420	2000	871	15330	20570	12520
196	Jan.	31.0	2310	2970	1550	3280	4200	3000	927	1230	840	5770	6950	4930	305	391	279	1900	2260	1550	1900	2440	1740	11850	14110	9670
	Feb.	28.0	3490	8550	2280	2580	3920	1300	690	1160	300	6300	14660	4900	239	365	121	2250	4540	1800	1500	2280	757	14080	28350	11270
	Mar.	31.0	4880	23010	2130	2080	3440	741	532	988	151	7000	14710	4870	193	320	69	2540	5230	1610	1210	2000	430	15890	33840	10080
	Apr.	30.0	8240	19960	3980	1330	2190	573	309	568	111	6860	10790	4360	124	203	53	2750	4250	2030	776	1270	333	17180	26510	12760
	May	31.0	31900	161170	3550	890	2000	200	189	510	31	16250	23430	4370	83	186	19	7130	12410	1780	518	1160	245	44530	77180	11110
	June	30.0	12720	28970	4030	1180	2200	840	266	573	177	9160	18420	6060	110	205	78	3770	7540	2230	684	1280	488	23450	46900	13890
	July																									
	Aug.																									
	Sept																									
	SUMMARY	273.0	8910	161170	1550	1330	4200	200	309	1230	31	7470	23430	2500	124	391	19	3000	12410	1200	773	2440	245	18690	77180	7550
1961	Oct.																									
	Nov.																									
	Dec.																									
1962	Jan.																									
	Feb.																									
	Mar.																									
	Apr.																									
	May																									
	June																									
	July																									
	Aug.																									
	Sept																									
	SUMMARY																									

MONTHLY SUMMARY OF CONTINUOUS RECORDED FLOW AND QUALITY DATA

River Basin: Arkansas Station Numbers: PNS: 258 USGS: 1640.00

Stream and Location: Cimarron River at Mannford, Oklahoma
Lat. 36°09'40", long. 96°23'10", SE¼NE¼, Sec. 5, T.19 N, R.9 E., at bridge on County Hwy ½ mile north of Mannford, Creek County, Oklahoma, and at river mile 17.7.

Main Stream Flow: 1782 cfs Range: 432-3700 cfs Years: 15

Remarks: Records fair. Frequent minor stratification occurs at normal flows. During high flows stratification intensifies. Instantaneous conductivity range 100-13,100 micromhos. The flow recurrence intervals for water years 1961 and 1962 are 3.3½ and 2.7½ respectively.

Equations Used to Compute Concentrations From Specific Conductance

	Number Samples	Equations	Std. Error	Correl. Coeff.
Dissolved Solids:	24	DS = 0.5887 Sp. C.	131	0.9965
Chlorides:	142	Log Cl = 1.2032 Log Sp. C. - 1.2720	0.0625	0.9903
Sulfates:	141	SO_4 = 0.0661 Sp. C.	73	0.9077

Year	Month	Number of Days of Specific Conductance Record	STREAM FLOW Cubic Feet/Second Mean	Extremes Max. Day	Extremes Min. Day	SPECIFIC CONDUCTANCE Micromhos/Centimeter @ 25° C Wt. Mean	Extremes Max. Day	Extremes Min. Day	CHLORIDES (Cl) Milligrams/Liter Wt. Mean	Extremes Max. Day	Extremes Min. Day	CHLORIDES (Cl) Tons/Day Wt. Mean	Extremes Max. Day	Extremes Min. Day	SULFATES (SO_4) Milligrams/Liter Wt. Mean	Extremes Max. Day	Extremes Min. Day	SULFATES (SO_4) Tons/Day Wt. Mean	Extremes Max. Day	Extremes Min. Day	DISSOLVED SOLIDS (107° C) Milligrams/Liter Wt. Mean	Extremes Max. Day	Extremes Min. Day	DISSOLVED SOLIDS (107° C) Tons/Day Wt. Mean	Extremes Max. Day	Extremes Min. Day
1960	July	31.0	3680	11300	588	1740	4770	689	443	1420	139	4380	11900	1650	115	315	46	1140	2910	496	1030	2810	406	10200	25400	4430
	Aug.	11.9	3140	15700	500	2980	5550	1080	842	1710	238	3750	9920	1850	197	366	71	878	2130	413	1760	3270	635	7840	19000	3680
	Sept	17.6	1100	5630	398	4020	6970	2920	1520	2250	789	2520	4020	1160	331	460	193	549	1060	268	2960	4100	1720	4900	9500	2390
	SUMMARY	60.5	2660	15700	398	2940	6970	689	580	2250	139	3720	11900	1160	163	460	46	916	2910	268	1270	4100	406	8170	25400	2390
1960	Oct.	31.0	1960	9210	219	2720	9600	1050	724	3200	230	3780	16800	1650	179	621	69	934	3480	219	1600	5540	616	8340	31080	1950
	Nov.	30.0	1170	5960	419	3920	7500	1420	1130	2450	328	3560	8700	2320	259	495	94	819	1780	486	2310	4420	835	7300	15900	4340
	Dec.	31.0	789	1650	410	7250	13000	3210	2360	4750	885	5020	9650	2300	479	858	212	1020	1760	496	4270	7650	1890	9080	15540	4630
1961	Jan.	31.0	508	676	330	8350	9250	8000	2800	3160	2640	3820	5170	3010	550	611	529	754	1030	599	4910	5450	4710	6720	9130	5360
	Feb.	28.0	699	1840	461	7770	9600	5700	2560	3280	1720	4780	13310	3250	513	634	377	956	2660	652	4570	5650	3360	8520	23660	5820
	Mar.	31.0	831	2400	340	8230	10200	6020	2750	3550	1880	6150	16060	2630	543	673	397	1220	3150	520	6860	6000	3540	10860	28110	4660
	Apr.	30.0	1370	3810	436	5770	10730	2850	1790	3790	767	6620	17170	3250	381	708	188	1610	3680	662	3600	6320	1680	12550	32800	5720
	May	31.0	2820	10820	414	2310	8350	1260	610	2900	290	4610	17800	1380	155	552	83	1180	4350	342	1380	4920	766	10490	38800	3050
	June	30.0	4730	18320	504	1510	5250	765	357	1590	158	4550	8660	1670	100	347	51	1270	2610	381	890	3090	450	11320	23300	3390
	July	31.0	1930	6700	402	2670	7670	574	646	2540	113	3350	13670	751	163	506	38	846	3130	188	1660	4520	337	7560	27900	1670
	Aug.	31.0	1100	4880	257	4790	12810	2440	1630	4670	636	4260	22960	973	316	846	161	940	4710	342	2820	7560	1440	8380	42100	2160
	Sept	30.0	5330	50800	343	1230	6070	554	278	1930	107	4010	27430	1020	81	401	36	1170	8640	235	721	3570	326	10400	76810	2100
	SUMMARY	365.0	1960	50800	219	3030	13000	554	827	4750	107	4310	27430	751	290	858	36	1040	8640	188	1790	7650	326	9300	76810	1670
1961	Oct.	31.0	2610	15400	658	1280	4240	610	292	1240	190	2050	10530	902	84	280	41	590	2930	278	751	2490	360	5280	26150	2580
	Nov.	30.0	3840	20300	810	2170	6050	828	554	1890	188	5740	17860	2230	144	399	55	1490	5040	606	1280	3560	488	13250	45000	5390
	Dec.	31.0	1590	4310	1080	4650	9690	2030	1380	3260	511	5930	10800	3890	307	627	134	1320	2080	862	2740	5590	1200	11750	18550	7690
1962	Jan.	31.0	1060	1760	763	5460	8680	4610	1760	2920	1370	4960	9230	4060	9	573	304	1060	1810	844	3320	5110	2710	9640	16120	7690
	Feb.	28.0	1060	2270	508	6400	8890	5550	2110	3020	1710	5880	11900	3200	625	586	367	1220	2500	653	3680	5230	3270	10950	22300	5820
	Mar.	31.0	1800	3970	533	4900	9130	2490	1470	3110	653	3930	7550	2660	322	602	165	870	1860	591	2890	5370	1470	7700	16600	5270
	Apr.	30.0	1120	3480	545	4290	8400	2300	1260	2810	592	3790	8790	1800	283	554	152	856	2000	420	2530	4960	1350	7660	17830	3750
	May	31.0	663	3850	222	4340	9380	689	1270	3210	139	2200	6360	861	287	619	66	496	1120	281	2540	5520	406	4430	10030	2510
	June	30.0	5670	25130	916	1540	5400	425	365	1650	65	5280	13990	684	102	357	28	1510	3030	225	905	3180	250	13330	26960	2010
	July	31.0	1160	3930	374	3500	6520	1325	981	2080	304	3060	12520	1080	231	430	88	722	2760	282	2060	3860	780	6440	24460	2510
	Aug.	31.0	1180	5460	172	4370	8060	2270	1280	2670	583	3800	16680	1060	289	531	150	855	3830	212	2570	4740	1340	7630	34180	1890
	Sept	30.0	1330	4790	172	4550	10550	657	1350	3700	131	4820	31630	668	300	697	43	1077	5940	139	2680	6210	387	9590	53030	1240
	SUMMARY	365.0	1830	25130	172	3080	10550	425	861	3700	65	4130	31630	668	203	697	28	997	5940	139	1810	6210	250	8900	53030	1240

MONTHLY SUMMARY OF CONTINUOUS RECORDED FLOW AND QUALITY DATA

River Basin: Arkansas Station Numbers: PWS: 253 USGS: 1610.00

Stream and Location: Cimarron River at Perkins, Oklahoma
Lat. 35°58', long. 97°02', SW¼SW¼,Sec. 7, T.17 N., R.3 E., at bridge on State Hwy 40, 1 mi. south of Perkins, Payne County, Okla., and at river mile 87.3.

Main Stream Flow: 1293 cfs: Range: 235-3450 CFS Years: 23

NOTES:

Equations Used to Compute Concentrations From Specific Conductance

	Number Samples	Equations	Std. Error	Correl. Coeff.
Dissolved Solids:	25	DS = 0.5977 Sp. C.		
Chlorides:	137	Log Cl = 1.1906 Log Sp.C. - 1.2280	271	0.9874
Sulfates:	137	SO_4 = 0.0680 Sp. C.	0.0307	0.9971
			91	0.8729

Remarks: Records fair. Frequent minor stratification. Instantaneous conductivity range 425-16700 micromhos. The flow recurrence intervals for water years 1961 and 1962 are 2.71 and 2.42 respectively.

Year	Month	Number of Days of Specific Conductance Record	STREAM FLOW Cubic Feet/Second Mean	Extremes Max. Day	Extremes Min. Day	SPECIFIC CONDUCTANCE Micromhos/Centimeter @ 25° C Wt. Mean	Extremes Max. Day	Extremes Min. Day	CHLORIDES (Cl) Milligrams/Liter Wt. Mean	Extremes Max. Day	Extremes Min. Day	CHLORIDES (Cl) Tons/Day Wt. Mean	Extremes Max. Day	Extremes Min. Day	SULFATES (SO_4) Milligrams/Liter Wt. Mean	Extremes Max. Day	Extremes Min. Day	SULFATES (SO_4) Tons/Day Wt. Mean	Extremes Max. Day	Extremes Min. Day	DISSOLVED SOLIDS (103° C) Milligrams/Liter Wt. Mean	Extremes Max. Day	Extremes Min. Day	DISSOLVED SOLIDS (103° C) Tons/Day Wt. Mean	Extremes Max. Day	Extremes Min. Day
1960	July	31.0	2960	10700	389	2230	5500	647	604	1700	132	4810	14000	1330	152	374	44	1210	3140	307	1300	3290	387	10600	27600	2700
	Aug.	31.0	2611	14100	279	1810	8020	809	491	2640	172	3450	9190	894	123	565	55	867	2160	210	1080	4800	484	7620	19000	1840
	Sept	30.0	661	3230	257	3690	7080	1040	1090	2280	232	1930	3900	1040	251	482	71	447	931	268	2210	4240	622	3930	8180	2360
SUMMARY		92.0	2080	14100	257	2200	8020	647	604	2640	132	3420	14000	894	150	565	44	845	3140	210	1320	4800	387	7430	27600	1840
1960	Nov.	31.0	2120	11880	200	2460	12530	1090	644	4500	245	3680	10800	1520	167	852	74	955	2710	310	1470	7490	651	8390	23770	2730
	Nov.	30.0	663	3200	364	4800	7990	1260	1428	2630	292	2550	4590	2030	326	543	86	583	1090	453	2870	4770	754	5130	9540	4000
	Dec.	31.0	552	861	405	9240	13460	3810	3115	5750	1800	4640	10420	2510	628	1050	395	935	1910	530	5520	9240	3470	8220	16750	4670
1961	Jan.	31.0	411	524	227	8860	10690	8020	2695	3700	2640	3280	5040	2000	603	727	546	667	990	400	5300	6390	4800	5860	8700	3530
	Feb.	28.0	538	948	383	10260	16070	8600	3527	6020	2860	5110	11520	3000	697	1090	585	1010	2090	604	6130	9610	5140	8880	18390	5310
	Mar.	31.0	765	2780	309	8400	11730	3670	2783	6150	1040	5730	16100	2530	571	798	249	1180	3130	517	5020	7010	2190	10350	27560	4550
	Apr.	30.0	1062	3600	385	6580	11210	3070	2080	3920	843	5960	16125	2920	447	762	209	1280	3560	601	3930	6700	1840	11280	31360	5290
	May	31.0	1980	10680	407	2880	8470	1220	777	2810	285	6140	15700	1680	196	576	83	1050	3810	429	1720	5070	727	9180	33420	3780
	June	30.0	3310	12400	387	2470	7510	684	646	2440	141	5760	21690	1160	168	511	47	1500	5390	285	1670	4490	409	13150	47280	2510
	July	31.0	741	3030	282	5620	16125	1570	1722	6059	391	3440	12820	1120	382	1100	107	762	2320	258	3360	9640	939	6700	20420	2270
	Aug.	31.0	971	5160	207	4490	7860	2180	1390	2570	559	3640	15180	380	319	534	148	835	3610	101	2800	4700	1300	7340	31690	884
	Sept	30.0	4330	55760	279	1010	7500	439	223	2430	83	2610	12610	423	69	510	30	806	4520	112	603	4480	262	7040	39900	984
SUMMARY		365.0	1430	55760	200	3620	16125	439	1020	6050	83	3990	21690	380	246	1100	30	962	5390	101	2161	9640	262	8460	47280	884
1961	Oct.	31.0	2170	19420	356	1350	4800	606	315	1430	122	1840	7600	881	92	326	41	538	2520	270	806	2870	362	4710	22080	2370
	Nov.	30.0	3570	29760	423	2800	7250	704	752	2330	146	7230	20310	1550	191	493	48	1830	5980	357	1670	4330	421	16100	52580	3140
	Dec.	31.0	945	1600	476	6800	10930	4360	2160	3800	1350	5510	9700	2520	462	743	310	1180	1890	547	4060	6530	2730	10350	16630	4810
1962	Jan.	31.0	879	2130	558	6340	7500	5364	1990	2430	1630	4710	11310	2672	431	510	365	1020	2450	589	3790	4480	3210	8980	21490	5180
	Feb.	28.0	805	1570	448	7140	8980	6000	2290	3018	1870	4980	11140	3010	486	611	408	1050	2260	633	4270	5370	3590	9260	19890	5560
	Mar.	31.0	488	753	356	7270	10280	4800	2340	3550	1430	3080	4860	1900	494	699	326	649	959	412	4250	6140	2870	5710	8430	3610
	Apr.	30.0	616	2140	365	5580	11010	1920	1710	3840	482	2840	4970	1790	380	749	131	630	1050	435	3340	6580	1150	5540	9230	3820
	May	31.0	429	2090	131	4970	10674	781	1490	3690	165	1720	3900	454	738	726	53	390	822	143	2970	6380	467	3430	7220	1260
	June	30.0	3900	27540	370	2920	14530	567	791	5340	113	8310	32900	674	199	988	39	2090	8370	186	1750	8690	339	18360	73660	1630
	July	31.0	932	3620	263	4830	6870	2700	1440	2960	724	3620	10950	1220	329	603	183	825	2590	268	2890	5300	1610	7250	22790	2360
	Aug.	31.0	858	5500	137	4130	7900	2070	1190	2580	525	2760	12260	868	281	537	140	648	3050	183	2470	4720	1230	5700	26770	1610
	Sept	30.0	781	2200	131	5550	8830	991	1700	2950	219	3570	17900	360	377	601	67	793	3650	103	3310	5280	593	6970	32110	910
SUMMARY		365.0	1380	27540	131	3880	14530	567	1110	5340	113	4060	32900	360	263	988	39	963	8370	103	2320	8690	339	8490	73660	910

MONTHLY SUMMARY OF CONTINUOUS RECORDED FLOW AND QUALITY DATA

River Basin: Arkansas Station Numbers: PRS: 709 USGS: 1974.00

Stream and location: Salt Creek at Cimarron near Okeene, Oklahoma. Lat. 36°06', Long. 98°12', SW¼, Sec. 20, T.19 N., R.9 W., at bridge on County Hwy, 7 miles east of Okeene, Blaine County, Okla., and 2 mi. upstream from mouth.

Equations Used to Compute Concentrations From Specific Conductance

	Number Samples		Equations	Std. Error	Correl. Coeff.
Dissolved Solids:	27	TDS	= 0.6942 Sp.C.	546	0.9910
Chlorides:	108	Log Cl.	= 1.1804 Log Sp.C. - 1.2204	0.0941	0.9224
Sulfates:	43	SO_4	= 0.1142 Sp.C.	239	0.6601

Main Stream Flow: 43.4 cfs; Range: none Years: 1 Remarks: Records good. Stratification nil. Instantaneous conductivity range 500-56,000 micromhos.

NOTES:

Year	Month	Number of Days of Specific Conductance Record	STREAM FLOW, Cubic Feet/Second: Mean	Extremes: Max. Day	Extremes: Min. Day	SPECIFIC CONDUCTANCE, Micromhos/Centimeter @ 75° C: Wt. Mean	Extremes: Max. Day	Extremes: Min. Day	CHLORIDES (Cl), Milligrams/Liter: Wt. Mean	Extremes: Max. Day	Extremes: Min. Day	CHLORIDES (Cl), Tons/Day: Wt. Mean	Extremes: Max. Day	Extremes: Min. Day	SULFATES (SO_4), Milligrams/Liter: Wt. Mean	Extremes: Max. Day	Extremes: Min. Day	SULFATES (SO_4), Tons/Day: Wt. Mean	Extremes: Max. Day	Extremes: Min. Day	DISSOLVED SOLIDS (103° C), Milligrams/Liter: Wt. Mean	Extremes: Max. Day	Extremes: Min. Day	DISSOLVED SOLIDS (103° C), Tons/Day: Wt. Mean	Extremes: Max. Day	Extremes: Min. Day
1960	July																										
	Aug.																										
	Sept.																										
SUMMARY																											
1960	Oct.																										
	Nov.																										
	Dec.																										
1961	Jan.																										
	Feb.																										
	Mar.																										
	Apr.																										
	May																										
	June																										
	July	30.3	7	23	2	16900	27800	9180	5950	10800	2850	109	424	16	1930	3170	1050	36	126	6	11800	19300	6370	216	766	36
	Aug.	27.5	56	877	1	5460	17700	2160	1630	6300	520	240	4730	14	645	2020	246	95	1840	5	3930	12300	1500	578	11200	29
	Sept	30.0	84	1010	5	4110	15200	1710	1120	5200	396	252	3320	51	469	1740	195	106	1370	18	2860	10600	1190	645	8360	110
SUMMARY		88.0	49	1010	1	5300	27800	1710	1500	10800	396	194	4730	14	1030	3170	195	78	1840	5	3680	19300	1190	476	11200	29
1961	Oct.	31.0	85	1660	7	3770	20550	929	1000	7420	192	229	2710	59	431	2350	106	99	1260	21	2620	14260	645	599	7640	127
	Nov.	30.0	185	3320	32	3220	10500	1410	833	3360	313	414	2810	266	368	1200	160	183	1440	96	2240	7290	976	1110	8760	588
	Dec.	31.0	30	72	19	11270	13890	9410	3650	4680	2950	300	612	187	1760	1590	1070	105	220	65	7830	9640	6530	642	1340	397
1962	Jan.	31.0	43	86	23	10890	14840	6450	3510	5060	1090	407	736	195	1240	1690	737	144	262	71	7360	10300	4480	878	1590	431
	Feb.	28.0	23	36	14	11100	13290	9310	3990	4340	2920	220	264	163	1270	1520	1030	78	96	56	7710	9220	6480	473	583	346
	Mar.	31.0	16	21	13	13200	24560	10560	6400	9160	3380	187	492	125	1510	2800	1210	84	150	44	9160	17050	7330	389	916	267
	Apr.	30.0	19	55	12	14250	23920	9430	6420	8880	2960	263	921	115	1630	2730	1080	82	248	41	9890	16600	6550	500	1820	247
	May	31.0	8	13	5	10620	14140	9070	3400	4780	2030	71	136	43	1210	1610	1040	25	48	16	7370	9810	6300	153	291	94
	June	30.0	40	356	7	8730	30380	2310	2700	11740	563	292	1210	52	997	3470	263	108	501	19	6060	21090	1600	655	3050	117
	July	31.0	18	230	2	9220	39590	5590	2880	16070	1600	143	1250	22	1050	4520	637	52	498	7	6400	27480	3860	317	3020	44
	Aug.	31.0	40	780	2	3460	9850	1300	904	3120	337	97	1150	19	395	1120	171	42	541	6	2400	6830	1040	259	3290	39
	Sept	30.0	15	250	3	9310	24600	6360	2910	9180	1060	118	1250	21	1060	2810	725	43	490	8	6460	17080	4410	262	2980	45
SUMMARY		365.0	44	3320	2	6395	39590	929	1670	16070	192	219	2810	19	730	4520	106	95	1440	6	4440	27480	645	519	8760	39

MONTHLY SUMMARY OF CONTINUOUS RECORDED FLOW AND QUALITY DATA

Basin Name: Arkansas Station Number: PRR 240 USGS 1540.00

Stream and Location: Cimarron River near Waynoka, Oklahoma
Lat. 36°30'55", Long. 98°52'45", Sec. 33, T.24 N., R.16 W., at bridge on U.S. Hwy 281, 3 mi. south of Waynoka, Woods County, Okla., and at river mile 247.0.

Main Stream Flow: 421 cfs Range: 54-1081 cfs Years: 25

Equations Used to Compute Concentrations From Specific Conductance

	Number Samples	Equations	Std. Error	Correl. Coeff.
Dissolved Solids:	26	DS=0.6445 SpC	908.	0.9970
Chlorides:	161	Log Cl=1.0922 Log SpC-0.8175	0.0333	0.9904
Sulfates:	135	SO_4=0.0191 SpC+306	197.	0.7156

Remarks: Records poor. Occasional minor stratification. Instantaneous conductivity range 1000-62,000 micromhos. The flow recurrence intervals for water years 1961 and 1962 are 1.61 and 1.85 respectively.

NOTES: Three significant digits are shown for all measured and computed data. Means and totals, with the exception of stream flow, are based only on periods when specific conductance was measured. Stream flow is for the entire period. Note notes are given in Explanation of Tables.

Year	Month	Number of Days of Specific Conductance Record	STREAM FLOW Cubic Feet/Second Mean	STREAM FLOW Extremes Max. Day	STREAM FLOW Extremes Min. Day	SPECIFIC CONDUCTANCE Micromhos/Centimeter @ 25° C Wt. Mean	SPECIFIC CONDUCTANCE Extremes Max. Day	SPECIFIC CONDUCTANCE Extremes Min. Day	CHLORIDES (Cl) Milligrams/Liter Wt. Mean	CHLORIDES (Cl) Milligrams/Liter Extremes Max. Day	CHLORIDES (Cl) Milligrams/Liter Extremes Min. Day	CHLORIDES (Cl) Tons/Day Wt. Mean	CHLORIDES (Cl) Tons/Day Extremes Max. Day	CHLORIDES (Cl) Tons/Day Extremes Min. Day	SULFATES (SO_4) Milligrams/Liter Wt. Mean	SULFATES (SO_4) Milligrams/Liter Extremes Max. Day	SULFATES (SO_4) Milligrams/Liter Extremes Min. Day	SULFATES (SO_4) Tons/Day Wt. Mean	SULFATES (SO_4) Tons/Day Extremes Max. Day	SULFATES (SO_4) Tons/Day Extremes Min. Day	DISSOLVED SOLIDS (105° C) Milligrams/Liter Wt. Mean	DISSOLVED SOLIDS (105° C) Milligrams/Liter Extremes Max. Day	DISSOLVED SOLIDS (105° C) Milligrams/Liter Extremes Min. Day	DISSOLVED SOLIDS (105° C) Tons/Day Wt. Mean	DISSOLVED SOLIDS (105° C) Tons/Day Extremes Max. Day	DISSOLVED SOLIDS (105° C) Tons/Day Extremes Min. Day
1959	July	31.0	615	4560	20	10200	26100	5470	3680	10100	1840	4110	33200	475	501	810	407	811	5550	40	6600	16800	3530	7370	61700	798
	Aug.	30.0	340	4720	5	9760	34300	6100	3490	13600	2030	3740	36500	127	490	967	420	728	5860	10	6300	22100	3960	6760	67400	210
	Sept	31.0	191	1060	10	10500	30400	8200	7010	14600	2880	3610	19900	364	660	1010	460	534	1800	24	11900	23500	5290	6130	33700	562
		66.0	389	4720	5	11700	34400	5470	4290	14600	1840	3830	36500	127	530	1040	407	673	5860	10	7160	23500	3530	6750	67400	210
1960	Feb.	31.0	176	571	11	15260	38340	9630	5650	11400	3420	2680	8989	413	598	1040	490	283	847	29	9830	26710	6200	4460	14090	668
	Nov.	30.0	85	183	46	22170	26460	16740	8490	10300	6240	1950	2940	1050	731	813	627	167	339	95	14290	17050	10790	3280	6610	1780
	Dec.	31.0	172	384	80	24320	34430	12370	9390	13790	4480	4350	13230	1470	772	963	562	357	936	153	15670	22190	8610	7260	21430	2540
1961	Jan.	31.0	93	139	13	19430	28170	16950	7350	11000	4320	1840	2560	385	677	863	630	169	244	30	12520	18150	10930	3130	4380	635
	Feb.	28.0	203	663	32	20830	33950	10950	7650	13500	3920	4160	14240	337	689	956	514	377	1180	66	12910	21880	7060	7060	23300	607
	Mar.	31.0	278	1010	85	14080	25000	6940	5170	9680	2380	3820	13700	1820	575	783	639	425	1550	162	9070	16110	4470	6790	24100	3080
	Apr.	30.0	260	611	59	16960	25000	5570	6370	9680	1870	4320	10210	1630	622	783	610	635	973	94	10670	16110	3590	7670	17200	919
	May	31.0	513	3630	36	10750	35470	6490	3840	14400	2220	5310	23060	1130	511	1080	438	707	6500	85	6900	23500	4180	9550	63500	1390
	June	30.0	426	1700	17	10290	32730	2310	3670	13000	717	4210	30000	380	503	933	350	577	2780	67	6830	21090	1490	7610	50900	801
	July	31.0	260	690	5	12100	36240	2320	4380	14400	721	3160	13470	106	537	1090	350	387	1210	10	7800	23260	1490	5620	21610	190
	Aug.	31.0	274	1340	1	12970	32170	5800	4730	12700	1960	3500	12280	11	556	920	416	410	1610	2	8360	20730	3760	6180	30510	19
	Sept	30.0	73	440	11	19730	36440	6200	7470	14000	2870	1460	4510	398	683	1080	463	134	601	29	12710	23680	5880	2480	7940	651
		365.0	235	3630	1	14450	36340	2310	5320	15400	717	3370	23060	11	582	1080	350	389	6500	2	9310	24710	1490	5962	63500	19
1962	Oct.	31.0	71	324	1	28140	41950	8630	14160	17000	3080	975	4350	62	805	1110	665	65	670	3	16850	27030	5440	950	13510	70
	Nov.	30.0	239	544	87	19810	31800	12110	7510	12200	4380	4430	11540	2260	686	900	537	440	1090	183	12770	20010	7810	8210	18920	2720
	Dec.	31.0	140	389	61	22402	43000	8850	8670	19300	3110	3670	6660	1270	730	1280	473	289	521	118	14570	30290	5700	5710	10740	2170
1963	Jan.	31.0	251	611	101	25950	49620	9040	10090	20300	3190	6820	16260	3350	801	1250	470	542	1040	320	16750	31850	5860	11310	23160	5760
	Feb.	28.0	187	570	49	17870	29800	5280	6710	11600	1770	3370	5880	277	667	870	407	325	717	59	11520	18690	3400	5790	8630	528
	Mar.	31.0	134	702	68	21360	33540	10860	8250	13300	3680	2930	5630	1710	716	950	511	257	520	150	13770	21840	6990	6950	9370	2860
	Apr.	30.0	99	321	13	29550	44840	18890	11190	18300	7120	3990	11020	605	851	1160	667	220	600	34	18400	29900	12170	6030	17980	765
	May	31.0	22	168	0	29720	38700	--	11700	15400	--	681	6180	0	873	1050	--	51	440	0	19160	26950	--	1120	10820	0
	June	30.0	981	2510	139	11210	26430	1360	4030	10300	603	10430	50650	3010	520	810	332	1350	4160	303	7220	17030	870	10700	43930	6350
	July	31.0	405	2530	18	9365	35560	1580	2360	14200	634	2570	9620	106	437	986	336	477	2280	21	6420	22930	1020	4820	16690	199
	Aug.	31.0	162	1080	0	10580	38130	--	3790	15300	--	1600	13610	0	506	1630	--	221	1510	0	6920	26510	--	2980	23600	0
	Sept	30.0	1133	11360	0	3650	20560	--	1390	15700	--	10210	110900	0	695	1090	--	1480	15460	0	6090	35440	--	16590	213830	0
		365.0	313	11360	0	13529	49620	1360	6950	20300	603	4150	110900	0	564	1250	332	672	15460	0	8710	31850	870	7380	213830	0

NORTH FORK RIVER NEAR CANTONMENT, OKLAHOMA—Continued

RECORDS OF CHEMICAL QUALITY AND SEDIMENT DISCHARGE

River Basin: Arkansas **System Number:** USGS 667 USCE 1570.50

Stream and Location: Canadian River near Buffalo, Oklahoma. Lat. 36°50'22", long. 99°19'18", NW¼SW¼SW¼ Sec. 2, T. 27 N., R. 20 W., at bridge on U.S. Hwy. 64 approx. 16 1/2 mi. E. of Buffalo, Harper County, Okla., and at river mi. 389 above the mouth. (Wire weight located at bridge. USGS gaging station located approx. 7 mi. upstream from quality station.)

Drainage Area: 101 sq mi **Gage:** --- **Years:** 2

Remarks: Records poor. Occasional minor stratification at normal flows. Stratification generally increases with an increase in flow. Instantaneous conductivity range 600-71000 micromhos.

Equations Used to Compute Concentrations from Specific Conductance

Constituent	Number of Samples	Equations	Std. Error	Correl. Coeff.
Solids	26	86 = 0.6114 Sp. C.	447.	0.9935
Chlorides	156	Log Cl = 1.1660 Log Sp. C. - 1.1334	0.0861	0.9878
Sulfates	157	SO_4 = 0.0356 Sp. C.	211.	0.6937

Year	Month	Number of Days of Specific Conductance Record	STREAM FLOW: Cubic Feet/Second Mean	STREAM FLOW: Acre-Feet/Day Max.	STREAM FLOW: Acre-Feet/Day Min.	SPECIFIC CONDUCTANCE: Micromhos/Centimeter at 25° C Wt. Mean	SPECIFIC CONDUCTANCE: Micromhos/Centimeter at 25° C Max.	SPECIFIC CONDUCTANCE: Micromhos/Centimeter at 25° C Min.	CHLORIDES (Cl): Milligrams/Liter Wt. Mean	CHLORIDES (Cl): Milligrams/Liter Max.	CHLORIDES (Cl): Milligrams/Liter Min.	CHLORIDES (Cl): Tons/Day Wt. Mean	CHLORIDES (Cl): Tons/Day Max.	CHLORIDES (Cl): Tons/Day Min.	SULFATES (SO_4): Milligrams/Liter Wt. Mean	SULFATES (SO_4): Milligrams/Liter Max.	SULFATES (SO_4): Milligrams/Liter Min.	SULFATES (SO_4): Tons/Day Wt. Mean	SULFATES (SO_4): Tons/Day Max.	SULFATES (SO_4): Tons/Day Min.	DISSOLVED SOLIDS (180° C): Milligrams/Liter Wt. Mean	DISSOLVED SOLIDS (180° C): Milligrams/Liter Max.	DISSOLVED SOLIDS (180° C): Milligrams/Liter Min.	DISSOLVED SOLIDS (180° C): Tons/Day Wt. Mean	DISSOLVED SOLIDS (180° C): Tons/Day Max.	DISSOLVED SOLIDS (180° C): Tons/Day Min.
1959	Feb	14.2	22	160	0	9020	21000	1370	3150	6060	950	386	1150	2	325	756	121	32	115	1	5510	12800	2060	536	1950	3
	Aug	24.6	50	536	0	4760	32200	1610	1510	13200	340	325	2570	2	171	1160	51	37	289	1	2980	19700	866	625	6980	2
	Sept	28.2	1	7	0	20900	46200	9650	6170	20200	3250	17	170	1	766	1660	247	2	16	1	12600	28200	5900	27	267	1
	1959	68.0	27	536	0	5660	46200	1610	1780	20200	268	143	2570	1	190	1660	51	16	289	1	5580	28200	866	267	4900	1
1960	Oct	31.0	113	525	0	6350	20960	-----	2000	6060	-----	667	2390	0	226	764	---	69	268	0	3880	12820	-----	1180	4250	0
	Nov	30.0	67	89	59	6610	13200	3080	1310	4720	861	235	880	167	157	473	110	28	89	21	2700	8120	1890	486	1510	366
	Dec	31.0	87	133	56	7380	14990	4200	2380	5660	1234	558	1860	221	263	536	150	62	182	26	4510	9160	2570	1060	3120	453
1961	Jan	31.0	72	90	60	6670	8900	2320	1480	2960	616	270	433	108	166	317	82	32	46	16	2860	5660	1620	550	795	232
	Feb	28.0	121	481	24	6180	32800	1780	1960	13170	430	633	2050	75	223	1160	60	72	306	9	3780	19570	1060	1260	5220	158
	Mar	31.0	201	951	53	5350	11960	2190	1660	4170	577	889	0290	113	190	625	79	103	845	15	3270	7290	1360	1780	16500	252
	Apr	30.0	138	483	20	6360	14780	1510	2160	5350	376	797	5160	116	260	526	56	89	309	13	4120	9060	926	1530	8690	220
	May	31.0	26	102	3	10630	26500	4250	3650	10570	1250	250	1720	36	378	963	151	26	165	3	6500	16200	2600	448	2810	59
	June	30.0	309	2130	1	3700	20160	1920	1070	7680	491	886	8960	23	132	717	68	110	997	2	2260	12310	1174	1880	17120	37
	July	31.0	221	2060	0	4350	17970	-----	1360	6720	-----	805	8559	0	162	660	---	96	1090	0	2780	10990	-----	1650	17250	0
	Aug	31.0	213	1360	6	5670	18210	2310	1750	6830	614	1010	9980	53	202	648	83	116	1090	6	3670	11130	1610	1990	18690	95
	Sept	30.0	41	102	7	7630	19500	1630	1860	7390	352	134	686	66	129	604	52	16	68	5	2220	11920	875	243	814	86
	1960	365.0	134	2130	0	5380	28500	1630	1620	13170	252	585	9980	0	189	1160	52	68	1090	0	3260	19570	875	1170	18690	0
1961	Oct	31.0	23	233	6	15080	28800	5350	5680	11270	1660	360	6720	67	537	997	190	33	604	5	9220	17120	3273	571	10390	88
	Nov	30.0	106	757	76	5750	6720	5280	1780	2990	890	784	1810	269	205	310	114	90	435	33	3520	5330	1960	1550	7680	558
	Dec	31.0	87	168	30	7760	26000	3660	2520	10360	1015	588	2200	224	275	926	129	66	197	27	4730	15900	2220	1110	3180	462
1962	Jan	31.0	77	280	9	8680	25700	3760	2900	10230	1080	583	2670	90	302	910	133	61	239	10	5190	15760	2290	1080	4110	162
	Feb	28.0	111	497	47	6370	13790	4120	2010	4980	1210	598	4160	269	227	688	168	68	443	32	3890	8380	2520	1160	7690	546
	Mar	31.0	93	161	61	9630	22690	3030	1760	8820	843	447	2130	258	201	808	109	52	195	32	3660	13870	1850	886	7350	543
	Apr	30.0	56	168	23	9660	32980	6860	3170	13860	1660	476	2510	123	336	1170	172	50	227	16	5770	20160	2960	867	3890	265
	May	31.0	5	20	0	13680	28360	-----	4810	11430	-----	63	302	0	480	1010	---	6	28	0	8260	17330	-----	109	478	0
	June	30.0	360	1860	125	9650	23000	1910	3180	8960	484	4850	29080	396	337	819	69	514	2060	52	5780	14860	1170	8810	45660	882
	July	31.0	470	2660	66	5570	19500	1920	1720	7190	496	2180	28690	279	198	694	69	251	1920	31	3610	11920	1180	4320	33040	530
	Aug	31.0	100	1280	0	8630	23070	-----	2780	8980	-----	750	14160	0	380	821	---	81	1480	0	5150	14180	-----	1390	25380	0
	Sept	30.0	473	2580	2	6680	25210	2360	1370	9970	687	1760	11320	50	166	897	90	208	1380	5	2810	15610	1550	3360	23660	81
	1961	365.0	185	2580	0	6930	32980	1910	2220	13860	496	1100	29080	0	267	1170	69	123	2060	0	4260	20160	1170	2110	45660	0

MONTHLY SUMMARY OF CONTINUOUS RECORDED FLOW AND QUALITY DATA

River Basin: Arkansas Station Numbers: [illegible] 773 [illegible] None

Stream and Location: Cimarron River at Protection, Kansas
Lat. 37°01'30", long. 99°29'11", Sec. 3, T. 35 S., R. 28 W., at bridge on FAS road 154, 11½ mi. south of Protection, Comanche County, Kans. (USGS Gaging Station located approx. 8 miles below quality station.)

Mean Stream Flow: 185 cfs Range: None Years: 1

Equations Used to Compute Concentrations From Specific Conductance

Constituent	Number Samples	Equations	Std. Error	Correl. Coeff.
Solids	37	$DS = 0.5884\ Sp.\ C.$	94	0.9436
Chlorides	85	$Cl = 0.2577\ Sp.\ C.$	34	0.8899
Sulfates	85	$SO_4 = 0.0961\ Sp.\ C.$	48	0.8580

Remarks: Records fair. Occasional minor stratification. Instantaneous conductivity range 20-4900 micromhos.

Year	Month	Number of Days of Specific Conductance Record	STREAM FLOW, Cubic Feet/Second: Mean	Gain/Loss: Max. Day	Gain/Loss: Min. Day	SPECIFIC CONDUCTANCE, Micromhos/Centimeter at 25°C: Wt. Mean	Gain/Loss: Max. Day	Gain/Loss: Min. Day	CHLORIDES (Cl), Milligrams/Liter: Wt. Mean	Gain/Loss: Max. Day	Gain/Loss: Min. Day	CHLORIDES (Cl), Tons/Day: Wt. Mean	Gain/Loss: Max. Day	Gain/Loss: Min. Day	SULFATES (SO_4), Milligrams/Liter: Wt. Mean	Gain/Loss: Max. Day	Gain/Loss: Min. Day	SULFATES (SO_4), Tons/Day: Wt. Mean	Gain/Loss: Max. Day	Gain/Loss: Min. Day	DISSOLVED SOLIDS (105° C), Milligrams/Liter: Wt. Mean	Gain/Loss: Max. Day	Gain/Loss: Min. Day	DISSOLVED SOLIDS (105° C), Tons/Day: Wt. Mean	Gain/Loss: Max. Day	Gain/Loss: Min. Day
1960	June	12.1	309	2130	1	2520	2950	2200	651	701	569	115	178	63	237	277	207	42	65	16	1480	1760	1300	261	407	97
	July	9.9	221	2060	0	1670	1690	1290	380	437	332	216	308	109	130	159	121	70	145	40	867	995	757	491	906	268
	Aug.	10.2	215	1580	6	1980	2680	35	512	663	9	88	363	7	187	236	3	52	132	2	1170	1670	21	280	827	15
	Sept.	28.9	61	102	7	2680	2960	2080	692	703	537	78	192	12	252	278	196	29	70	4	1580	1760	1230	178	437	27
	Oct.																									
	Nov.																									
	Dec.																									
1961	Jan.																									
	Feb.																									
	Mar.																									
	Apr.																									
	May																									
	June	12.1	309	2130	1	2520	2950	2200	651	701	569	115	178	63	237	277	207	42	65	16	1480	1760	1300	261	407	97
	July	9.9	221	2060	0	1670	1690	1290	380	437	332	216	308	109	130	159	121	70	145	40	867	995	757	491	906	268
	Aug.	10.2	215	1580	6	1980	2680	35	512	663	9	88	363	7	187	236	3	52	132	2	1170	1670	21	280	827	15
	Sept.	28.9	61	102	7	2680	2960	2080	692	703	537	78	192	12	252	278	196	29	70	4	1580	1760	1230	178	437	27
	Oct.	27.0	106	213	0	2090	2960	35	539	703	9	102	308	7	201	278	3	38	165	2	1230	1760	21	233	906	15
	Nov.																									
	Dec.																									
1962	Jan.	31.0	23	233	6	2960	3130	2170	680	806	560	63	352	13	268	294	204	17	128	5	1550	1860	1280	98	801	29
	Feb.	28.0	106	757	26	2620	2980	1880	673	769	484	298	587	147	266	280	176	109	360	56	1560	1750	1100	679	2230	335
	Mar.	31.0	87	468	39	2800	3560	2220	724	918	572	109	287	96	284	335	208	63	105	35	1630	2040	1300	386	655	220
1963	Jan.	31.0	77	283	0	2810	4130	1760	676	1070	440	140	338	19	266	388	163	51	123	7	1560	2630	1020	330	771	43
	Feb.	28.0	111	497	47	2980	3510	2060	743	906	531	222	1210	101	271	330	194	84	462	37	1700	2070	1210	505	2770	229
	Mar.	31.0	95	161	61	2830	3560	2290	734	912	590	189	316	136	268	332	215	68	115	50	1680	2090	1350	431	719	312
	Apr.	30.0	36	108	23	3380	4300	2630	871	1110	677	133	362	57	318	404	247	40	88	20	1990	2530	1550	304	552	130
	May	31.0	3	20	0	3620	3900	--	936	1010	--	12	104	0	340	367	--	4	38	0	2130	2290	--	28	236	0
	June	30.0	366	1860	125	1730	3020	815	446	770	210	680	1860	230	103	284	77	260	670	87	1020	1770	478	1551	4190	545
	July	31.0	470	2440	46	1060	2870	760	272	722	196	345	1560	75	99	263	71	125	573	27	622	1630	447	788	3540	171
	Aug.	31.0	100	1280	0	1210	1280	--	316	839	--	83	736	0	114	308	--	31	275	0	716	1930	--	193	1730	0
	Sept.	30.0	470	2500	7	1960	2930	610	370	758	108	366	1350	9	180	275	49	127	669	2	934	1720	267	791	2930	11
	Oct.	365.0	185	2500	0	1710	4300	453	441	1110	114	219	1860	0	161	404	43	80	670	0	1010	2530		501	4190	0

MONTHLY SUMMARY OF CHEMICAL QUALITY DATA

River Basin: Arkansas Stream Number: [illegible] 240 [illegible] 1570.00

Stream and Location: Cimarron River near Moscow, Oklahoma
Lat., 37°30', Long. 100°59', [illegible], Sec. 24, T.6 N., R.25 E., at bridge on County Hwy, 4½ miles NE of Moscow, Seward County, Oklahoma, and at river mile 384.1.

Mean Stream Flow: 102 cfs Range: 37 - 202 cfs Years: 19

Remarks: Records poor. Occasional minor stratification. Instantaneous conductivity range 100-3450 micromhos. The flow recurrence interval for water year 1961 is 1.01. Station moved to Bluff Creek near Protection, Kansas in August 1961.

Constituent	Number Samples	Equations	Std. Error	Correl. Coeff.
Solids:	37	[illegible] = 0.5484 Sp. C.	96.0	0.9626
Chlorides:	77	Cl = 0.2527 Sp. C.	42.0	0.9096
Sulfates:	77	SO_4 = 0.0807 Sp. C.	24.0	0.6193

Year	Month	Number of Days of Specific Conductance Record	Stream Flow: Cubic Feet/Second: Weighted Mean	Stream Flow: Cubic Feet/Second: Extremes: Max. Day	Stream Flow: Cubic Feet/Second: Extremes: Min. Day	Specific Conductance: Micromhos/Centimeter at 25° C: Wt. Mean	Specific Conductance: Micromhos/Centimeter at 25° C: Extremes: Max. Day	Specific Conductance: Micromhos/Centimeter at 25° C: Extremes: Min. Day	Chlorides (Cl): Milligrams/Liter: Wt. Mean	Chlorides (Cl): Milligrams/Liter: Extremes: Max. Day	Chlorides (Cl): Milligrams/Liter: Extremes: Min. Day	Chlorides (Cl): Tons/Day: Wt. Mean	Chlorides (Cl): Tons/Day: Extremes: Max. Day	Chlorides (Cl): Tons/Day: Extremes: Min. Day	Sulfates (SO_4): Milligrams/Liter: Wt. Mean	Sulfates (SO_4): Milligrams/Liter: Extremes: Max. Day	Sulfates (SO_4): Milligrams/Liter: Extremes: Min. Day	Sulfates (SO_4): Tons/Day: Wt. Mean	Sulfates (SO_4): Tons/Day: Extremes: Max. Day	Sulfates (SO_4): Tons/Day: Extremes: Min. Day	Dissolved Solids (103° C): Milligrams/Liter: Wt. Mean	Dissolved Solids (103° C): Milligrams/Liter: Extremes: Max. Day	Dissolved Solids (103° C): Milligrams/Liter: Extremes: Min. Day	Dissolved Solids (103° C): Tons/Day: Wt. Mean	Dissolved Solids (103° C): Tons/Day: Extremes: Max. Day	Dissolved Solids (103° C): Tons/Day: Extremes: Min. Day
1960	Oct.	31.0	62	122	36	2670	2760	2270	650	727	598	73	197	29	200	226	184	22	61	9	1660	1830	1365	184	440	64
	Nov.	31.0	22	51	9	2590	2990	2150	680	786	556	39	103	18	209	242	171	12	32	5	1520	1760	1260	88	229	30
	Dept	30.0	41	256	5	2380	3050	2120	625	802	557	69	301	11	192	267	172	21	110	3	1400	1790	1250	154	653	23
	[illegible]	92.0	35	256	5	2440	3050	2110	647	802	556	60	301	11	199	267	171	19	110	3	1450	1790	1260	135	653	23
1961	Jan.	31.0	39	157	61	2130	2580	1370	556	657	361	89	153	91	172	202	111	28	47	16	1250	1470	884	280	347	113
	Feb.	28.0	34	77	32	2360	2760	2180	620	674	574	60	130	55	191	208	177	28	40	17	1390	1510	1280	202	290	122
	Mar.	31.0	68	129	33	2270	2580	2150	596	657	551	110	192	55	183	202	170	26	39	17	1320	1470	1260	264	431	124
	Apr.	31.0	95	167	27	2260	2260	1960	588	677	508	150	261	36	181	270	156	46	80	17	1320	1960	1160	337	585	120
	May	30.0	80	256	17	2130	2530	1960	544	666	432	137	436	22	173	205	133	42	134	7	1260	1490	967	307	975	49
	June	31.0	98	271	30	2310	2780	2150	607	704	552	157	442	64	186	218	169	48	138	14	1360	1540	1260	353	990	102
	July	30.0	66	93	42	2220	2480	2080	582	630	547	101	168	65	179	194	168	31	46	20	1300	1410	1230	226	332	144
	Aug.	31.0	68	132	32	2090	2430	1850	548	664	473	100	207	49	168	186	145	31	64	13	1230	1350	1060	223	463	110
	Sept.	30.0	84	284	25	2150	2640	1910	564	630	484	128	1370	36	173	194	149	39	621	11	1260	1610	1090	284	3060	84
	Oct.	31.0	98	451	23	2450	2690	1380	636	665	361	154	617	33	133	199	105	25	128	10	973	1440	765	254	932	73
	Nov.	31.0	110	343	37	2139	2880	1650	556	736	420	176	1060	53	171	226	133	54	388	16	1250	1650	971	395	2261	119
	[illegible]	305.0	81	684	17	2360	2860	1380	561	877	361	123	1370	22	172	270	105	18	621	7	1290	1960	765	276	3060	49

MONTHLY SUMMARY OF CONTINUOUS RECORDED FLOW AND QUALITY DATA

River Basin: Arkansas | Station Numbers: PHS: 250 | USGS: 1525.00

Stream and Location: Arkansas River at Ralston, Oklahoma
Lat. 36°30'10", Long. 96°43'30", in SW¼, Sec. 1, T. 23 N., R. 5 E., at bridge on State Hwy 18, at Ralston, Osage County, Oklahoma and at river mile 596.0.

Mean Stream Flow: 6760 cfs | Range: 73-133,800 cfs | Years: 3

Equations Used to Compute Concentrations From Specific Conductance

	Number Samples	Equations	Std. Error	Correl. Coeff.
Dissolved Solids:	23	DS = 0.6000 Sp. C.	±1.0000	0.9816
Chlorides:	161	Log Cl = 1.5000 Log Sp. C. - 1.7766	0.0673	0.9910
Sulfates:	161	SO_4 = 0.2037 Sp. C.	27.0000	0.9175

Remarks: Records good. Stratification usually increases with an increase in flow. Instantaneous conductivity range 73-2960 micromhos. The flow recurrence intervals for water years 1961-1962 are 6.36 and 1.52 respectively.

Water Year	Month	Number of Days of Specific Conductance Record	Stream Flow (Cubic Feet/Second) Mean	Extremes Max. Day	Extremes Min. Day	Specific Conductance (Micromhos/Centimeter @ 25° C) Wt. Mean	Extremes Max. Day	Extremes Min. Day	Chlorides (Cl) Milligrams/Liter Wt. Mean	Extremes Max. Day	Extremes Min. Day	Chlorides (Cl) Tons/Day Wt. Mean	Extremes Max. Day	Extremes Min. Day	Sulfates (SO_4) Milligrams/Liter Wt. Mean	Extremes Max. Day	Extremes Min. Day	Sulfates (SO_4) Tons/Day Wt. Mean	Extremes Max. Day	Extremes Min. Day	Dissolved Solids (103° C) Milligrams/Liter Wt. Mean	Extremes Max. Day	Extremes Min. Day	Dissolved Solids (103° C) Tons/Day Wt. Mean	Extremes Max. Day	Extremes Min. Day
1960	July	31.0	3930	16500	2760	1170	2100	661	266	520	105	4300	8620	2570	132	219	67	2110	4060	1260	739	1260	385	12200	23600	7430
	Aug.	28.5	9130	40200	2160	874	1850	253	116	435	30	3020	4460	1500	44	192	28	1720	4000	906	363	1110	152	9930	23100	5230
	Sept.	30.0	6830	17400	2130	1170	1860	407	263	439	57	3340	5260	900	121	193	42	1580	3910	418	700	1110	266	9180	17400	3360
SUMMARY		89.5	6660	40200	2130	957	2100	253	193	520	30	3510	8620	900	99	219	26	1810	4060	418	576	1260	152	10600	23600	3360
1961	Oct.	31.0	2760	10900	1100	1720	2460	389	196	660	95	1870	6750	1180	105	196	42	1060	2830	551	609	1120	350	6170	15100	3180
	Nov.	30.0	4010	19130	1400	1110	2230	473	258	567	58	2330	6730	1690	115	232	42	1260	2780	977	665	1360	262	7100	16100	5640
	Dec.	31.0	2521	9850	1760	1750	2130	1190	406	528	260	2760	3460	2340	181	222	123	1230	2500	961	1050	1280	712	7120	14300	5630
1962	Jan.	31.0	1760	2130	1510	2280	2670	1590	567	663	353	2590	2950	1960	227	257	165	1080	1210	899	1320	1410	953	6140	6980	5180
	Feb.	28.0	2370	4970	1620	1820	2580	1162	427	666	200	2730	6300	2070	189	257	108	1210	2920	861	1090	1400	623	7000	14850	4970
	Mar.	31.0	3980	17460	1760	1210	2050	656	265	552	66	2630	5530	1760	125	213	67	1360	3260	872	725	1230	272	7780	18750	5030
	Apr.	30.0	4050	12200	1510	1310	1870	712	276	666	121	4670	6070	3120	138	195	76	2220	3220	1430	787	1120	427	12860	18570	9600
	May	31.0	27980	133800	5620	456	1580	231	107	352	26	8070	11770	2530	48	166	26	5130	10380	1420	286	966	130	29710	59410	8180
	June	30.0	8710	12500	3580	1210	1880	762	276	660	128	6950	7280	3820	136	195	77	2660	3760	1600	787	1130	445	16230	21700	9220
	July	31.0	7860	31130	2280	685	2130	230	116	486	26	2430	6820	1680	71	211	26	1520	3030	872	411	1220	150	8820	17680	5030
	Aug.	31.0	7310	17930	2320	900	1980	260	160	470	31	3260	8080	1160	91	206	27	1880	4360	811	540	1100	150	10930	26300	6680
	Sept.	30.0	14860	99130	2730	686	3140	263	73	371	28	2860	7630	1080	51	171	25	2080	6090	1130	286	986	144	11930	28380	6320
SUMMARY		365.0	7680	133800	1100	892	2680	231	243	666	26	3300	11770	1160	92	257	26	1860	10380	551	515	1400	130	10810	59410	3180
1962	Oct.	31.0	11860	63860	2980	420	1580	289	112	327	28	3290	12260	1870	43	166	30	2100	8240	1160	216	937	174	12190	67560	6360
	Nov.	30.0	19200	96680	4720	418	1660	266	99	272	29	5080	9860	1630	46	171	26	3300	7260	1260	271	903	148	19500	61980	7350
	Dec.	31.0	6380	11215	4810	1650	1720	1570	316	388	268	5640	7510	3760	157	180	111	2580	3760	1830	871	1060	640	14680	21360	10570
1963	Jan.	31.0	4600	23760	1550	1620	2010	820	326	487	100	3790	8360	1880	148	209	66	1830	7031	860	836	1200	372	10810	24950	6960
	Feb.	28.0	7510	22080	3730	1060	1800	326	276	421	80	4670	6760	2930	120	187	55	2630	3240	1780	606	1060	315	14060	18800	10210
	Mar.	31.0	3200	6860	2900	1810	1820	1620	630	650	373	3900	4530	3240	190	199	171	1720	1970	1660	1100	1130	991	9560	11200	8630
	Apr.	30.0	2540	3720	2251	1890	2080	1770	660	711	612	3350	5190	2630	196	217	166	1350	1960	1170	1130	1250	1060	7820	9010	6760
	May	31.0	1930	3530	1260	2030	2300	1330	516	613	260	2710	6670	1660	216	267	138	1130	1780	778	1260	1430	788	6610	10320	4680
	June	30.0	9610	29400	2860	927	2000	378	173	685	35	6630	7660	1430	96	208	29	2650	3420	1460	536	1200	227	16400	19780	6130
	July	31.0	4510	21010	2320	827	1780	430	167	465	41	2330	5280	1160	86	185	40	1510	2660	806	486	1070	258	8780	16460	6467
	Aug.	31.0	3790	44920	1870	1320	1720	917	273	395	100	2780	6980	1160	138	178	95	1580	2130	768	789	1040	550	8000	13630	5560
	Sept.	30.0	5530	14570	1960	717	1580	352	115	296	67	1850	6060	873	76	163	37	1110	2460	402	430	427	211	6630	15260	3670
SUMMARY		365.0	6960	96680	1260	961	2300	266	166	711	28	4590	12260	873	119	267	26	1830	8240	402	541	1430	148	11700	67560	3670

MONTHLY SUMMARY OF CONTINUOUS RECORDED FLOW AND QUALITY DATA

River Basin: Arkansas Station Numbers: PHS: 236 USGS: 1510.00

Stream and Location: Salt Fork of the Arkansas River at Tonkawa, Oklahoma
Lat. 36°40'30", long. 97°18'40", NE-1/4 SW-1/4, Sec. 4, T.25 N., R.1 W., at bridge on U. S. Hwy 177 at south edge of Tonkawa, Kay County Okla., and 33.8 river mi. above mouth.

Main Stream Flow: 714 cfs; Range: 97-2340 cfs; Years: 27

Equations Used to Compute Concentrations From Specific Conductance

	Number Samples	Equations	Std. Error	Correl. Coeff.
Dissolved Solids:	26	TDS = 0.5997 Sp. C.	185.	0.9341
Chlorides:	123	Log Cl = 1.1425 Log Sp. C. - 1.0569	0.0293	0.9921
Sulfates:	122	SO_4 = 0 0853 Sp. C.	72.	0.7237

Remarks: Record very good. Occasional minor stratification. Instantaneous conductivity range 60-10,000 micromhos. The flow recurrence intervals for water years 1961-1962 are 3.6 and 2.57 respectively.

NOTES: Three significant digits are shown for all measured and computed date. Means and totals, with the exception of stream flow, are based only on periods when specific conductance was measured. Stream flow is for the entire period. More notes are given in Explanation of Tables.

Year	Month	Number of Days of Specific Conductance Record	STREAM FLOW Cubic Feet/Second			SPECIFIC CONDUCTANCE Micromhos/Centimeter @ 25° C			CHLORIDES (Cl) Milligrams/Liter			CHLORIDES (Cl) Tons/Day			SULFATES (SO_4) Milligrams/Liter			SULFATES (SO_4) Tons/Day			DISSOLVED SOLIDS (103° C) Milligrams/Liter			DISSOLVED SOLIDS (103° C) Tons/Day		
			Mean	Max. Day	Min. Day	Wt. Mean	Max. Day	Min. Day	Wt. Mean	Max. Day	Min. Day	Wt. Mean	Max. Day	Min. Day	Wt. Mean	Max. Day	Min. Day	Wt. Mean	Max. Day	Min. Day	Wt. Mean	Max. Day	Min. Day	Wt. Mean	Max. Day	Min. Day
1960	July	31.0	1290	8180	168	2310	4640	401	631	1350	83	2190	5420	561	197	395	34	680	1650	166	1390	2780	241	4800	11600	1170
	Aug.	31.0	1640	9010	144	1550	5430	404	405	1620	84	1780	8380	584	132	462	34	581	2670	168	930	3260	243	4100	18800	1190
	Sept	30.0	1200	4080	372	2190	3990	832	583	1140	190	1880	5650	731	187	339	71	601	1860	245	1320	2390	499	4240	13100	1730
SUMMARY		92.0	1370	9010	144	1970	5430	401	527	1620	83	1950	8380	561	168	462	34	621	2670	166	1180	3260	241	4380	18800	1170
1960	Oct.	31.0	917	3050	130	2130	4410	1180	557	1270	284	1380	2690	444	181	375	101	448	876	131	1280	2643	710	3160	6180	923
	Nov.	30.0	545	2620	210	2590	4230	1280	696	1210	311	1022	2630	641	220	359	109	323	901	192	1550	2530	770	2280	6360	1360
	Dec.	31.0	424	1130	211	3680	4350	2150	1040	1250	560	1190	1880	698	313	370	183	357	606	206	2210	2610	1290	2520	4280	1460
1961	Jan.	31.0	274	337	159	4220	4720	3970	1220	1380	1130	897	1150	563	359	401	338	265	338	165	2530	2830	2380	1870	2390	1160
	Feb.	28.0	301	374	212	4480	5240	4030	1300	1550	1150	1060	1560	676	381	446	342	309	448	201	2690	3140	2420	2180	3170	1420
	Mar.	31.0	398	1130	117	4250	4890	3040	1230	1430	834	1310	2650	365	361	417	259	387	793	109	2550	2930	1820	2730	5600	766
	Apr.	30.0	830	2660	303	3850	5060	2600	1100	1490	697	2450	5040	1080	327	431	221	731	1600	317	2310	3040	1560	5160	11260	2240
	May	31.0	2950	13100	371	1970	4120	555	509	1180	120	4050	12550	879	167	351	47	1330	4330	275	1180	2470	333	9380	30540	1940
	June	30.0	1060	2010	304	3220	4510	1740	895	1310	445	2560	4460	987	274	385	148	785	1360	292	1930	2700	1050	5540	9600	2060
	July	31.0	508	3140	119	2040	4890	465	529	1430	98	724	1580	240	173	417	40	237	457	83	1220	2930	279	1670	3220	588
	Aug.	31.0	1090	3410	98	3910	7850	1180	1110	2470	288	3281	14880	309	332	670	101	978	4220	93	2340	4710	711	6900	29780	654
	Sept	30.0	1770	17030	427	1220	4000	325	295	1140	65	1400	2980	874	104	340	28	494	1270	282	733	2400	195	3490	8950	1990
SUMMARY		365.0	923	17030	98	2620	7850	325	704	2470	65	1760	14880	240	222	670	28	557	4330	83	1568	4710	195	3910	30540	588
1961	Oct.	31.0	958	7040	179	1730	4390	272	439	1270	53	1130	2030	599	147	373	23	379	741	177	1040	2640	164	2680	5230	1250
	Nov.	30.0	2580	20760	514	1310	4050	281	318	1160	55	2210	3670	1360	111	344	24	771	1470	459	784	2430	169	5440	10340	3240
	Dec.	31.0	670	1820	369	3110	5390	1660	859	1600	417	1550	2540	1010	266	460	141	497	727	323	1870	3230	994	3370	5130	2280
1962	Jan.	31.0	604	2350	344	3670	5760	2170	1040	1730	567	1690	6200	995	312	489	184	508	1810	299	2200	3450	1300	3590	12770	2110
	Feb.	28.0	715	1490	285	4110	4790	3600	1180	1400	1010	1700	5370	813	349	408	306	673	1570	245	2470	2870	2160	4750	11100	1730
	Mar.	31.0	355	545	263	3790	4350	3420	1080	1250	953	1030	1580	763	322	370	291	308	475	230	2270	2610	2050	2180	3350	1620
	Apr.	30.0	315	799	193	4060	4800	2480	1160	1400	660	986	1630	729	345	408	211	293	499	212	2440	2880	1490	2070	3520	1500
	May	31.0	184	571	65	5030	5940	4110	1490	1790	1170	735	2100	262	427	507	349	211	596	76	3020	3560	2460	1490	4210	534
	June	30.0	1150	2590	87	4570	7420	3070	1330	2320	845	4120	11610	337	388	633	261	1200	3200	99	2740	4450	1840	8470	22570	700
	July	31.0	313	1840	65	2824	5700	850	769	1710	195	648	2310	222	241	486	73	203	656	66	1690	3420	1510	1430	4630	465
	Aug.	31.0	427	2050	43	3980	5290	2520	1140	1570	674	1310	3940	171	339	449	215	390	1180	50	2390	3170	1510	2750	8360	349
	Sept	30.0	354	3240	41	3310	6180	683	920	1870	152	879	3230	150	281	527	58	268	911	44	1980	3700	410	1890	6430	311
SUMMARY		365.0	719	20760	41	2870	7420	272	782	2320	53	1510	11610	150	246	633	23	472	3200	44	1721	4450	164	3310	22570	311

MONTHLY SUMMARY OF CONTINUOUS RECORDED FLOW AND QUALITY DATA

River Basin: Arkansas Station Numbers: PHS: 235 USGS: 1505.00

Stream and Location: Salt Fork of the Arkansas River near Jet, Oklahoma
Lat. 36°45', long. 98°08'45", NE¼NE¼, Sec. 11, T. 26 N., R. 9W., at bridge on County Hwy, 0.6 miles below axis of Great Salt Plains Dam, 6 miles northeast of Jet, Alfalfa County, Oklahoma, and 102.7 river miles above mouth.

Main Stream Flow: 404 cfs Range: 37-1430 cfs Years: 25

Remarks: Records good. Frequent minor stratification. Instantaneous conductivity range 730-27,000 micromhos. The flow recurrence intervals for water years 1961-1962 are 2.63 and 1.72 respectively.

Equations Used to Compute Concentrations From Specific Conductance

	Number Samples	Equations	Std. Error	Correl. Coeff.
Dissolved Solids:	26	DS = 0.5927	196	0.9021
Chlorides:	132	Log Cl = 1.2132 Log Sp.C. - 1.3185	0.0249	0.9817
Sulfates:	132	SO_4 = 0.0183 Sp. C.+ 343	85	0.3241

Year	Month	Number of Days of Specific Conductance Record	STREAM FLOW Cubic Feet/Second Mean	Extremes Max. Day	Extremes Min. Day	SPECIFIC CONDUCTANCE Micromhos/Centimeter @ 25° C Wt. Mean	Extremes Max. Day	Extremes Min. Day	CHLORIDES (Cl) Milligrams/Liter Wt. Mean	Extremes Max. Day	Extremes Min. Day	Tons/Day Wt. Mean	Extremes Max. Day	Extremes Min. Day	SULFATES (SO_4) Milligrams/Liter Wt. Mean	Extremes Max. Day	Extremes Min. Day	Tons/Day Wt. Mean	Extremes Max. Day	Extremes Min. Day	DISSOLVED SOLIDS (103° C) Milligrams/Liter Wt. Mean	Extremes Max. Day	Extremes Min. Day	Tons/Day Wt. Mean	Extremes Max. Day	Extremes Min. Day
1960	July	0.0	503	1190	37	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Aug.	23.4	567	3100	26	3610	6430	2350	1010	2000	590	1950	8140	131	408	459	386	785	3250	30	2140	3810	1390	4110	17000	249
	Sept	6.5	425	1860	102	2860	3940	2420	751	1100	611	2250	3050	1320	395	414	387	1180	1930	581	1700	2340	1430	5080	7170	3000
SUMMARY		29.9	498	3100	26	3350	6430	2350	926	2000	590	2010	8140	131	401	459	386	871	3250	30	1990	3810	1390	4320	17000	249
1960	Oct.	31.0	341	639	39	5340	6400	5100	1600	1970	1510	1470	2710	206	441	460	435	405	751	49	3160	3790	3020	2910	5380	398
	Nov.	30.0	240	571	119	4820	5260	4500	1410	1570	1300	910	2240	501	430	438	424	278	665	140	2860	3120	2670	1850	4510	998
	Dec.	31.0	248	381	128	5100	5500	4520	1510	1650	1300	1010	1590	538	435	443	425	291	448	151	3020	3260	2680	2020	3170	1080
1961	Jan.	31.0	186	291	108	4950	5540	4480	1460	1670	1290	730	1210	467	432	443	424	217	342	128	2930	3290	2650	1470	2420	926
	Feb.	28.0	216	301	119	5190	6110	4650	1540	1880	1350	898	1290	535	437	454	427	254	351	142	3080	3620	2760	1790	2480	1050
	Mar.	31.0	323	625	68	5170	6310	4700	1540	1960	1370	1340	2850	278	436	457	428	379	748	80	3070	3740	2780	2670	5600	336
	Apr.	30.0	417	774	170	5510	5900	4950	1660	1800	1460	1860	3680	800	442	450	433	497	924	204	3270	3500	2940	3670	6850	1560
	May	31.0	1075	3090	150	4140	6460	3440	1180	2010	936	3410	10790	811	418	460	405	1210	3430	185	2460	3830	2040	7110	21820	1550
	June	30.0	601	1127	161	4370	4900	3400	1280	1440	925	2070	4260	604	423	432	405	685	1300	186	2590	2900	2020	4200	8640	1230
	July	31.0	108	317	14	5330	8310	4260	1600	2730	1210	466	1220	99	439	494	420	128	359	18	3160	4930	2520	922	2440	179
	Aug.	31.0	943	3700	12	4540	25260	2600	1310	10500	659	3340	14800	89	426	805	390	1080	3940	16	2780	15000	1540	6840	28660	161
	Sept	30.0	350	673	193	4540	5090	3670	1310	1510	1010	1240	2000	765	426	435	409	402	742	226	2690	3020	2180	2540	4040	1540
SUMMARY		365.0	421	3700	12	4710	25260	2600	1370	10500	659	1560	14800	89	429	805	390	489	3940	16	2790	15000	2020	3180	28660	161
1961	Oct.	31.0	239	552	82	5070	5600	4460	1500	1690	1280	965	2070	370	435	444	424	280	638	98	3010	3320	2640	1940	4210	727
	Nov.	30.0	523	1040	313	4690	5040	3960	1360	1490	1110	1920	3760	1090	428	434	415	603	1190	359	2780	2980	2350	3920	7690	2250
	Dec.	31.0	301	363	231	4900	7180	4370	1440	2290	1250	1170	2230	805	431	473	422	350	462	264	2900	4250	2590	2360	4160	1660
1962	Jan.	31.0	303	685	182	6480	16860	4100	2070	6440	1160	1680	5830	871	460	651	417	375	856	238	3840	9990	2430	3140	9050	1830
	Feb.	28.0	359	699	179	4680	6170	3980	1370	1900	1120	1320	3580	603	428	455	415	414	855	204	2780	3660	2360	2690	6890	1250
	Mar.	31.0	187	370	109	4490	5310	4300	1290	1590	1240	652	1240	368	424	439	421	214	420	118	2660	3150	2550	1340	2560	753
	Apr.	30.0	175	400	92	5550	7040	5000	1670	2240	1470	788	2120	452	443	471	434	209	475	111	3290	4170	2960	1550	3960	875
	May	31.0	92	368	5	6420	10340	5580	2000	3560	1680	493	1820	46	459	532	444	113	427	7	3810	6130	3300	938	3480	81
	June	30.0	916	2340	52	5180	11580	4200	1540	4080	1190	3610	10920	569	436	555	419	1080	2760	77	3070	6860	2490	7570	20610	957
	July	31.0	146	590	20	5940	6620	4700	1820	2070	1370	814	2920	100	450	463	428	201	717	24	3530	3920	2790	1580	5660	193
	Aug.	31.0	220	820	5	5400	10600	4310	1620	3660	1230	962	4020	41	440	537	421	262	994	7	3200	6280	2560	1900	7780	73
	Sept	30.0	187	388	7	6580	11210	5710	2060	3930	1730	1040	3160	69	462	548	446	232	727	11	3900	6650	3480	1970	6030	121
SUMMARY		365.0	306	2340	5	5280	16860	3960	1580	6440	1110	1290	10920	41	440	651	415	360	2760	7	3130	9990	2350	2560	20610	73

MONTHLY SUMMARY OF CONTINUOUS RECORDED FLOW AND QUALITY DATA

River Basin: Arkansas Station Numbers: PHS: 232 USGS: 1490.00

Stream and Location: Medicine Lodge River near Kiowa, Kansas
Lat. 37°03', long. 98°28', in SW¼, Sec. 36, T.34 S., R.11 W., at bridge on Hwy 14, 1½ mile NE of Kiowa, Barber County, Kansas, and 22.2 river mile above mouth.

Equations Used to Compute Concentrations From Specific Conductance

	Number Samples	Equations	Std. Error	Correl. Coeff.
Dissolved Solids:	32	DS = 0.7367 Sp. C.	68	0.9471
Chlorides:	121	Cl = 0.0799 Sp. C.	17	0.7037
Sulfates:	121	SO_4 = 0.2971 Sp. C.	61	0.8054

Main Stream Flow: 154 cfs; Range: 51 - 496 cfs Years: 17

Remarks: Records good. Occasional minor stratification. Instantaneous conductivity ranges 30-1780 micromhos. The flow recurrence intervals for water years 1961-1962 are 1.79 and 1.36 respectively.

NOTES:

Year	Month	Number of Days of Specific Conductance Record	STREAM FLOW Cubic Feet/Second Mean	Extremes Max. Day	Extremes Min. Day	SPECIFIC CONDUCTANCE Micromhos/Centimeter @ 25° C Wt. Mean	Extremes Max. Day	Extremes Min. Day	CHLORIDES (Cl) Milligrams/Liter Wt. Mean	Extremes Max. Day	Extremes Min. Day	CHLORIDES (Cl) Tons/Day Wt. Mean	Extremes Max. Day	Extremes Min. Day	SULFATES (SO_4) Milligrams/Liter Wt. Mean	Extremes Max. Day	Extremes Min. Day	SULFATES (SO_4) Tons/Day Wt. Mean	Extremes Max. Day	Extremes Min. Day	DISSOLVED SOLIDS (103° C) Milligrams/Liter Wt. Mean	Extremes Max. Day	Extremes Min. Day	DISSOLVED SOLIDS (103° C) Tons/Day Wt. Mean	Extremes Max. Day	Extremes Min. Day
1960	July	28.6	52	95	25	1130	1660	831	90	133	67	13	21	8	335	494	247	48	78	31	830	1230	612	120	194	76
	Aug.	27.5	137	2220	12	1390	1720	300	111	138	24	46	682	3	413	512	89	169	2530	11	1020	1270	221	420	6280	28
	Sept	17.7	18	35	10	793	1350	300	64	108	24	4	7	1	236	401	89	14	25	4	585	994	221	34	62	9
SUMMARY		73.8	69	2220	10	1290	1720	300	104	138	24	23	682	1	383	512	89	85	2530	4	950	1271	221	211	6280	9
1960	Oct.	31.0	129	835	18	683	1160	458	55	93	37	19	114	5	203	344	136	71	425	17	503	853	337	175	1050	42
	Nov.	30.0	78	101	70	900	935	808	72	75	65	15	19	13	267	278	240	56	70	50	663	689	595	140	174	123
	Dec.	31.0	90	126	72	897	967	784	72	77	63	17	22	14	266	287	233	64	83	51	661	712	578	160	206	127
1961	Jan.	31.0	82	115	58	920	1160	826	73	93	66	16	20	13	273	344	245	60	76	49	678	855	609	149	188	121
	Feb.	28.0	106	141	59	886	999	702	71	80	56	20	27	12	263	297	208	75	98	44	653	736	517	187	244	109
	Mar.	31.0	119	288	80	1000	1300	801	80	103	64	26	57	16	298	385	238	96	211	59	740	954	590	238	524	146
	Apr.	30.0	106	187	81	1020	1150	847	81	92	68	23	41	17	303	341	252	86	151	62	751	846	625	214	374	154
	May	31.0	103	662	39	910	1220	462	73	97	37	20	96	9	270	362	137	75	357	33	670	898	341	185	885	81
	June	30.0	71	227	17	838	1170	475	67	94	38	13	36	4	249	349	141	47	133	16	617	865	350	117	331	39
	July	31.0	68	448	7	666	1360	466	53	109	37	10	62	2	198	405	138	36	230	7	491	1000	344	90	570	18
	Aug.	31.0	328	3500	26	592	1200	441	47	96	35	42	384	6	176	357	131	155	1430	24	436	884	325	385	3550	59
	Sept	30.0	99	526	62	859	1040	581	69	83	46	18	73	13	255	310	173	68	271	46	633	768	428	169	672	115
SUMMARY		365.0	115	3500	7	805	1360	441	64	109	35	20	384	2	239	405	131	74	1430	7	593	1000	325	184	3550	18
1961	Oct.	31.0	56	132	47	927	1030	747	74	82	60	11	21	10	275	306	222	41	79	36	683	758	550	103	195	89
	Nov.	30.0	132	358	91	879	1010	673	70	81	54	25	56	17	261	299	200	93	207	61	648	743	496	230	513	152
	Dec.	31.0	103	154	61	958	1270	750	77	101	60	21	27	16	285	377	223	79	103	59	706	934	553	196	254	147
1962	Jan.	31.0	107	392	47	904	1260	705	72	101	56	21	60	11	269	374	209	78	221	40	666	927	520	193	548	99
	Feb.	28.0	109	180	50	970	1190	886	78	95	71	23	35	13	288	354	263	85	131	46	715	877	653	211	325	115
	Mar.	31.0	91	121	51	964	1160	854	77	93	68	19	23	13	286	346	254	70	84	47	710	858	629	174	207	117
	Apr.	30.0	75	90	65	980	1102	919	78	88	73	16	21	14	291	327	273	58	78	50	722	812	677	145	196	125
	May	31.0	48	321	17	817	1120	295	65	90	24	8	20	4	243	333	88	31	76	15	602	826	218	78	188	37
	June	30.0	193	1770	30	573	1070	263	46	86	21	24	100	7	170	318	78	89	371	26	422	788	194	220	921	64
	July	31.0	53	192	17	797	1260	406	64	100	33	9	27	4	237	373	121	34	99	15	587	925	300	84	246	38
	Aug.	31.0	29	293	0	783	1620	--	63	130	--	5	21	0	233	481	--	18	79	0	577	1190	--	44	199	0
	Sept	30.0	100	627	31	626	915	219	50	73	18	13	41	6	161	272	65	50	152	22	461	674	162	124	377	55
SUMMARY		365.0	91	1770	0	828	1620	219	66	130	18	16	100	0	246	481	65	60	371	0	610	1190	162	149	921	0

MONTHLY SUMMARY OF CONTINUOUS RECORDED FLOW AND QUALITY DATA

River Basin: Arkansas

Station Numbers: PHS: 772 USGS: 1484.50

Stream and Location: Salt Fork of the Arkansas River near Ingersoll, Oklahoma
Lat. 36°49', long. 98°22', in NW¼, Sec. 14, T.27 N., R.11 W., on State Hwy 8 and 58, 2½ mi. NE of Ingersoll, Alfalfa County, Okla. and at 120.3 river mi. above mouth.

Main Stream Flow: 366 cfs; Range: 90-1120 cfs Years: 11

NOTES:

Equations Used to Compute Concentrations From Specific Conductance

	Number Samples	Equations	Std. Error	Correl. Coeff.
Dissolved Solids:	34	TDS= 0.7796 Sp.C.	121	0.9094
Chlorides:	82	Cl = 0.0848 Sp.C.	34	0.7803
Sulfates:	82	SO_4= 0.4147 Sp.C.	90	0.8276

Remarks: Records good. Occasional minor stratification. Instantaneous conductivity range 150-3300 micromhos. The flow recurrence interval for water year 1962 is 1.05.

Year	Month	Number of Days of Specific Conductance Record	STREAM FLOW Cubic Feet/Second Mean	Extremes Max. Day	Extremes Min. Day	SPECIFIC CONDUCTANCE Micromhos/Centimeter @ 25° C Wt. Mean	Extremes Max. Day	Extremes Min. Day	CHLORIDES (Cl) Milligrams/Liter Wt. Mean	Extremes Max. Day	Extremes Min. Day	Tons/Day Wt. Mean	Extremes Max. Day	Extremes Min. Day	SULFATES (SO_4) Milligrams/Liter Wt. Mean	Extremes Max. Day	Extremes Min. Day	Tons/Day Wt. Mean	Extremes Max. Day	Extremes Min. Day	DISSOLVED SOLIDS (103° C) Milligrams/Liter Wt. Mean	Extremes Max. Day	Extremes Min. Day	Tons/Day Wt. Mean	Extremes Max. Day	Extremes Min. Day
1961	July																									
	Aug.																									
	Sept	28.8	96	458	38	1730	2780	795	147	237	68	38	170	12	717	1160	330	186	830	58	1350	2170	620	350	1560	110
SUMMARY		29.0	96	458	38	1740	2780	795	147	237	68	38	170	12	722	1160	330	186	830	58	1360	2170	620	350	1560	110
1961	Oct.	31.0	32	115	16	1940	2220	1220	165	189	104	14	34	8	805	923	506	69	165	39	1510	1730	951	130	310	73
	Nov.	30.0	97	229	63	2070	2360	1740	176	201	148	46	95	33	859	979	720	225	463	161	1620	1840	1350	420	870	302
	Dec.	31.0	68	84	52	2160	2430	1960	184	207	167	34	39	28	896	1010	813	175	188	135	1680	1890	1530	310	354	254
1962	Jan.	31.0	114	269	62	2010	2650	1430	171	225	122	53	107	35	835	1100	595	257	523	171	1570	2070	1120	482	984	320
	Feb.	28.0	87	162	60	2090	2850	1440	177	242	122	42	57	30	865	1180	597	204	276	147	1630	2220	1120	383	519	276
	Mar.	31.0	59	82	40	2240	2360	2080	190	201	177	30	44	21	928	981	862	146	216	100	1740	1840	1620	275	405	188
	Apr.	30.0	50	97	28	2220	2470	1950	189	210	166	26	51	15	923	1030	811	125	251	71	1730	1930	1520	235	472	133
	May	31.0	21	78	1	2290	2410	1940	194	205	165	11	43	1	949	1000	807	53	210	2	1780	1880	1520	99	394	3
	June	30.0	192	942	31	1250	2170	700	106	184	59	55	222	14	519	899	290	269	1080	68	976	1690	545	506	2040	128
	July	31.0	93	694	5	979	2200	600	83	185	51	21	68	2	406	912	249	102	335	11	763	1720	467	192	629	21
	Aug.	31.0	66	458	1	1290	2010	805	109	171	68	19	147	1	534	834	334	95	718	3	1000	1570	628	179	1350	6
	Sept	30.0	205	1210	0.4	736	2140	557	63	182	47	34	161	1	305	889	231	168	783	1	574	1670	434	316	1470	2
SUMMARY		365.0	90	1210	0.4	1549	2850	557	131	242	47	32	222	1	642	1180	231	155	1080	1	1210	2220	434	293	2040	2
1962	Oct.																									
	Nov.																									
	Dec.																									
1963	Jan.																									
	Feb.																									
	Mar.																									
	Apr.																									
	May																									
	June																									
	July																									
	Aug.																									
	Sept																									
SUMMARY																										

MONTHLY SUMMARY OF CONTINUOUS RECORDED FLOW AND QUALITY DATA

River Basin: Arkansas Station Numbers: PHS: 764 USGS: 1483.50

Stream and Location: Salt Fork of the Arkansas River near Winchester, Oklahoma
Lat. 36°57'45", long. 98°47'00", in SE¼, Sec. 26, T.29 N., R.15 W., at bridge on County Hwy, 1 mile N.E. of Winchester, Woods County, Oklahoma, and at river mile 155 above mouth.

Main Stream Flow: 96 cfs: Range: None Years: 1

NOTES:

Equations Used to Compute Concentrations From Specific Conductance

	Number Samples	Equations	Std. Error	Correl. Coeff.
Dissolved Solids:	34	TDS = 0.7796 Sp. C.	121	0.9094
Chlorides:	68	Log Cl = 1.6465 Log Sp. C. - 3.1244	0.0959	0.8609
Sulfates:	68	SO_4 = 0.4076 Sp. C.	113	0.8041

Remarks: Records poor. Occasional minor stratification.
Instantaneous conductivity range 100-2810 micromhos.

Year	Month	Number of Days of Specific Conductance Record	STREAM FLOW Cubic Feet/Second Mean	Extremes Max. Day	Extremes Min. Day	SPECIFIC CONDUCTANCE Micromhos/Centimeter @ 25° C Wt. Mean	Extremes Max. Day	Extremes Min. Day	CHLORIDES (Cl) Milligrams/Liter Wt. Mean	Extremes Max. Day	Extremes Min. Day	CHLORIDES (Cl) Tons/Day Wt. Mean	Extremes Max. Day	Extremes Min. Day	SULFATES (SO_4) Milligrams/Liter Wt. Mean	Extremes Max. Day	Extremes Min. Day	SULFATES (SO_4) Tons/Day Wt. Mean	Extremes Max. Day	Extremes Min. Day	DISSOLVED SOLIDS (103° C) Milligrams/Liter Wt. Mean	Extremes Max. Day	Extremes Min. Day	DISSOLVED SOLIDS (103° C) Tons/Day Wt. Mean	Extremes Max. Day	Extremes Min. Day
1960	July	31.0	55	1010	0	1660	2380	1010	154	271	66	23	422	1	679	970	411	100	1870	1	1300	1850	785	192	3570	2
	Aug.	31.0	282	5340	0	1340	2450	908	108	287	65	82	1440	1	547	1000	371	415	7590	1	1050	1910	709	794	14500	1
	Sept	30.0	11	41	2	1310	2500	584	120	297	27	4	21	1	535	1020	238	16	75	6	1020	1950	455	30	144	11
	SUMMARY	92.0	116	5340	0	1400	2500	584	118	297	27	37	1440	1	569	1020	238	179	7590	1	1090	1950	455	342	14500	1
1960	Oct.	31.0	45	224	1	1360	2410	1070	108	280	72	13	53	1	554	982	435	67	295	3	1060	1880	834	128	565	5
	Nov.	30.0	28	43	20	2170	2330	1940	234	264	195	18	23	13	887	950	790	68	91	50	1700	1820	1510	129	174	95
	Dec.	31.0	38	66	24	2000	2290	1580	205	257	130	21	32	13	816	934	644	84	125	54	1560	1790	1230	161	238	103
1961	Jan.	31.0	26	47	10	2260	2650	1900	250	327	186	17	36	7	921	1080	774	64	126	26	1760	2070	1480	122	240	50
	Feb.	28.0	59	106	26	1950	2330	1550	195	264	133	31	47	14	793	950	632	127	204	56	1520	1820	1210	242	389	107
	Mar.	31.0	103	781	30	1830	2380	1250	176	274	94	49	196	19	745	970	510	207	1080	72	1430	1860	975	396	2060	138
	Apr.	30.0	74	185	33	2230	2600	1930	244	317	193	49	108	25	909	1060	786	181	419	88	1740	2030	1500	346	802	167
	May	31.0	120	1420	8	1760	2700	1400	166	335	112	54	434	7	718	1100	571	233	2190	24	1370	2100	1090	446	4190	45
	June	30.0	77	608	3	1860	2650	1620	178	337	142	37	258	2	750	1080	660	156	1150	9	1430	2070	1260	299	2200	16
	July	31.0	9	119	0.1	1150	2550	763	82	303	42	4	18	0	469	1040	311	24	116	0	897	1990	595	45	222	0
	Aug.	31.0	506	11800	0	1040	2770	--	70	350	--	95	1890	0	423	1130	--	576	11900	0	810	2160	--	1100	22700	0
	Sept	30.0	63	832	8	1790	2900	1350	170	375	106	29	283	7	730	1180	550	123	1380	23	1400	2260	1050	236	2626	44
	SUMMARY	365.0	96	11800	0	1490	2900	763	127	375	42	33	1890	0	609	1180	311	158	11900	0	1170	2260	595	303	22700	0
1961	Oct.																									
	Nov.																									
	Dec.																									
1962	Jan.																									
	Feb.																									
	Mar.																									
	Apr.																									
	May																									
	June																									
	July																									
	Aug.																									
	Sept																									
	SUMMARY																									

MONTHLY SUMMARY OF CONTINUOUS RECORDED FLOW AND QUALITY DATA

River Basin: Arkansas Station Numbers: PHS: 229 USGS: 1478.00

Stream and Location: Walnut River at Winfield, Kansas
Lat. 37°14', long. 97°00', NE-1/4, Sec. 33, T.32 S., R.4 E., on bridge of Hwy 77, 1 mi. south of Winfield, Cowley County, Kans., and 24.3 river mile above mouth.

Equations Used to Compute Concentrations From Specific Conductance

	Number Samples	Equations	Std. Error	Correl. Coeff.
Dissolved Solids:	35	TDS = 0.6175 Sp. C.	85.	0.9369
Chlorides:	125	Log Cl = 1.3150 Log Sp. C. - 1.7410	0.0677	0.9745
Sulfates:	123	SO_4 = 0.1240 Sp. C.	34	0.8639

Main Stream Flow: 766 cfs; Range: 26-2210 cfs; Years: 41

Remarks: Records good. Stratification nil. Instantaneous conductivity range 130-1890 micromhos. The flow recurrence intervals for water years 1961-1962 are 16.42 and 6.31 respectively.

NOTES:

Year	Month	Number of Days of Specific Conductance Record	STREAM FLOW Cubic Feet/Second Mean	Extremes Max. Day	Extremes Min. Day	SPECIFIC CONDUCTANCE Micromhos/Centimeter @ 25° C Wt. Mean	Extremes Max. Day	Extremes Min. Day	CHLORIDES (Cl) Milligrams/Liter Wt. Mean	Extremes Max. Day	Extremes Min. Day	CHLORIDES (Cl) Tons/Day Wt. Mean	Extremes Max. Day	Extremes Min. Day	SULFATES (SO_4) Milligrams/Liter Wt. Mean	Extremes Max. Day	Extremes Min. Day	SULFATES (SO_4) Tons/Day Wt. Mean	Extremes Max. Day	Extremes Min. Day	DISSOLVED SOLIDS (103° C) Milligrams/Liter Wt. Mean	Extremes Max. Day	Extremes Min. Day	DISSOLVED SOLIDS (103° C) Tons/Day Wt. Mean	Extremes Max. Day	Extremes Min. Day
1960	July	31.0	548	3270	182	813	1330	505	123	235	66	181	811	69	101	166	63	149	715	56	501	823	312	740	3560	280
	Aug.	31.0	1720	7160	261	374	998	220	44	160	22	204	1100	43	46	124	27	215	1030	43	230	616	136	1070	5110	216
	Sept	30.0	303	2500	90	798	1480	286	120	270	31	98	1230	21	99	183	35	81	869	21	492	910	176	402	4320	107
SUMMARY		92.0	858	7160	90	504	1480	220	65	270	22	155	1230	21	63	183	27	149	1030	21	311	910	136	741	5110	107
1960	Oct.	31.0	665	6770	77	614	1740	296	84	340	32	151	926	22	76	216	37	136	756	20	379	1080	183	679	3760	101
	Nov.	30.0	307	2520	151	750	1620	287	110	310	31	91	211	51	93	201	36	77	242	47	463	1000	177	383	1200	232
	Dec.	31.0	377	2710	152	1100	1710	552	182	331	74	185	1980	74	137	212	69	139	1330	59	680	1060	341	692	6620	294
1961	Jan.	31.0	155	186	87	1610	1750	1320	300	342	235	125	136	76	200	217	164	84	90	50	995	1080	816	416	447	247
	Feb.	28.0	427	4010	136	1080	1800	527	176	355	69	203	1890	76	133	223	65	153	1410	63	664	1110	325	765	7010	314
	Mar.	31.0	1390	11300	153	542	1560	244	71	295	25	267	945	82	67	196	30	252	1080	64	335	963	151	1258	5370	321
	Apr.	30.0	1460	6940	427	654	1090	309	92	183	34	363	1990	177	81	136	38	320	1650	139	404	674	191	1594	8190	691
	May	31.0	6540	51300	553	306	1170	132	34	200	11	599	1520	237	38	145	16	670	2270	183	189	720	82	3332	11300	911
	June	30.0	962	4060	209	666	1290	261	94	228	27	244	902	125	83	160	32	215	681	89	411	796	161	1066	3390	443
	July	31.0	2780	21600	145	388	1580	171	38	296	16	284	1340	53	42	195	21	314	1360	43	209	972	106	1564	6750	212
	Aug.	31.0	1360	10800	178	521	1400	302	68	254	33	249	990	122	65	174	38	238	1110	83	322	864	187	1177	5550	415
	Sept	30.0	3370	20900	289	465	1300	214	58	229	20	526	1280	150	58	161	27	526	1550	110	287	799	132	2604	7700	546
SUMMARY		365.0	1650	51300	77	467	1800	132	59	355	11	264	1990	22	58	223	16	260	2270	20	288	1110	82	1289	11300	101
1961	Oct.	31.0	3620	22800	436	400	1290	215	48	227	20	468	1490	196	50	160	27	488	1650	152	247	794	132	2409	8200	756
	Nov.	30.0	4570	22100	813	438	1110	210	54	185	20	666	1190	406	56	137	26	666	1550	301	270	684	130	3328	7700	1500
	Dec.	31.0	858	2000	547	1120	1330	928	186	237	148	430	1080	305	139	165	115	321	783	219	692	822	573	1600	3900	1090
1962	Jan.	31.0	1610	8380	419	676	1340	265	96	238	28	364	1260	200	84	166	33	318	1150	148	417	826	163	1580	5700	739
	Feb.	28.0	1770	7810	491	594	1110	238	81	186	24	385	1200	245	72	138	30	343	953	180	361	687	147	1717	4740	897
	Mar.	31.0	611	1760	382	1130	1380	749	188	248	112	310	762	165	140	171	93	231	580	138	697	849	462	1149	2890	685
	Apr.	30.0	389	672	306	1170	1330	832	195	235	126	204	425	163	144	164	103	151	295	126	719	818	514	753	1470	626
	May	31.0	189	404	103	1360	1640	1010	240	313	164	122	344	78	169	204	125	86	221	52	840	1010	622	428	1100	258
	June	30.0	891	6520	151	668	1700	409	90	330	49	216	880	51	80	211	51	192	898	41	400	1050	252	960	4450	205
	July	31.0	876	6000	118	515	1260	360	67	220	42	158	1183	48	64	156	45	151	1100	27	318	775	222	751	5480	134
	Aug.	31.0	103	218	59	1210	1550	717	206	290	105	57	164	42	150	192	89	42	109	28	748	953	443	207	563	141
	Sept	30.0	1610	8070	68	445	1530	241	55	285	24	239	972	52	55	189	30	239	1020	35	275	941	148	1195	5090	172
SUMMARY		365.0	1410	22800	59	575	1700	210	77	330	20	290	1490	42	71	211	26	268	1650	27	355	1050	130	1339	8200	134

MONTHLY SUMMARY OF CONTINUOUS RECORDED FLOW AND QUALITY DATA

River Basin: Arkansas Station Numbers: PMS: 227 USGS: 1465,100

Stream and Location: Arkansas River at Arkansas City, Kansas
Lat. 37°03'30", long. 97°03'24", T.34 S., R.3 E.,
at bridge on U.S. Hwy 166, NE¼ ½ mi. W. of Ark. City,
Cowley County, Kansas, and at river mile 701.4.

Main Stream Flow: 1785 cfs Range: 366-5830 cfs Years: 45

Equations Used to Compute Concentrations From Specific Conductance

	Number Samples	Equations	Std. Error	Correl. Coeff.
Dissolved Solids:	26	DS = 0.6014 Sp. C.	51.8139	0.9883
Chlorides:	151	Log Cl= 1.2957 Log Sp. C. -1.6179	0.0515	0.9876
Sulfates:	151	SO_4 = 0.1143 Sp. C.	18.9376	0.8721

Remarks: Records good. Frequent minor stratification. Instantaneous conductivity ranges 50-3900 micromhos. The flow recurrence intervals for water years 1961-1962 are 3.34 and 5.29 respectively.

Year	Month	Number of Days of Specific Conductance Record	STREAM FLOW Cubic Feet/Second Mean	Extremes Max. Day	Extremes Min. Day	SPECIFIC CONDUCTANCE Micromhos/Centimeter² @ 25° C Wt. Mean	Extremes Max. Day	Extremes Min. Day	CHLORIDES (Cl) Milligrams/Liter Wt. Mean	Extremes Max. Day	Extremes Min. Day	CHLORIDES (Cl) Tons/Day Wt. Mean	Extremes Max. Day	Extremes Min. Day	SULFATES (SO_4) Milligrams/Liter Wt. Mean	Extremes Max. Day	Extremes Min. Day	SULFATES (SO_4) Tons/Day Wt. Mean	Extremes Max. Day	Extremes Min. Day	DISSOLVED SOLIDS (103° C) Milligrams/Liter Wt. Mean	Extremes Max. Day	Extremes Min. Day	DISSOLVED SOLIDS (103° C) Tons/Day Wt. Mean	Extremes Max. Day	Extremes Min. Day
1960	July	31.0	1510	2950	1110	1480	2150	547	315	503	89	1280	1840	710	169	245	65	684	910	302	889	1290	341	3610	4800	2650
	Aug.	24.8	1710	19100	461	1300	2070	419	270	379	60	815	1030	594	148	236	48	446	769	293	779	1250	252	2350	4060	1340
	Sept	30.0	1880	6720	471	963	2300	353	186	549	48	943	1510	552	110	262	40	556	899	278	579	1380	212	2930	4740	1470
SUMMARY		85.8	2370	19100	461	1200	2300	353	246	549	48	1030	1860	552	137	262	40	570	910	278	722	1380	212	3010	4800	1470
1960	Oct.	31.0	2650	8740	574	833	2180	368	147	527	47	1050	1830	736	95	249	40	679	1220	364	501	1310	209	3580	6410	1920
	Nov.	30.0	1480	8380	816	1190	1940	369	233	439	51	929	1200	915	136	221	42	542	950	469	716	1160	222	2850	5020	2470
	Dec.	31.0	1210	2510	824	1650	2110	955	355	490	176	1160	1490	895	188	241	109	612	823	459	990	1270	574	3220	4340	2420
1961	Jan.	31.0	955	1250	556	2060	2400	1720	474	579	373	1220	1600	747	235	274	197	605	789	369	1240	1440	1034	3190	4160	1950
	Feb.	28.0	1310	3380	774	1580	2020	851	337	462	151	1190	2010	865	181	230	97	641	1170	468	951	1210	512	3370	6180	2470
	Mar.	31.0	1680	6840	816	1250	2010	360	248	460	50	1120	1980	814	143	229	41	648	1310	501	752	1210	216	3410	6920	2640
	Apr.	30.0	1650	3480	941	1400	1940	795	287	440	138	1270	1620	1030	160	221	91	710	900	552	860	1170	478	3730	4740	2910
	May	31.0	5760	38590	779	604	1960	244	97	438	30	1500	3230	903	69	221	28	1070	3020	463	363	1160	147	5630	15840	2440
	June	30.0	1890	5510	724	1200	2020	565	235	484	89	1200	1820	706	137	230	64	698	1120	417	722	1220	340	3680	5880	2200
	July	31.0	3690	18060	744	663	2130	246	109	525	30	1020	1670	830	76	254	28	714	1360	489	399	1340	148	3750	7180	2470
	Aug.	31.0	3210	10590	1060	714	1600	289	120	341	37	1040	1490	733	82	182	33	709	1200	438	429	959	174	3710	6290	2310
	Sept	30.0	3060	9810	1150	746	1570	369	127	313	51	1050	2190	719	85	179	42	701	1410	489	449	941	222	3700	7410	2580
SUMMARY		365.0	2360	38590	556	947	2400	246	173	579	30	1110	3230	706	108	274	28	691	3020	364	570	1460	148	3650	15840	1920
1961	Oct.	31.0	2520	11840	1000	949	2000	401	174	458	58	1180	2780	998	108	228	46	733	2020	548	571	1200	241	3870	10640	2890
	Nov.	30.0	4460	18700	1530	766	1750	292	132	385	38	1580	2520	1060	88	200	33	1050	1710	754	461	1050	176	5510	9000	3970
	Dec.	31.0	1770	3050	822	1650	2140	1300	355	500	261	1690	2460	1020	188	244	149	897	1350	507	991	1290	783	4730	7130	2670
1962	Jan.	31.0	1950	10380	434	1190	2680	265	233	668	33	1230	2550	541	136	305	30	716	1730	269	715	1610	159	3770	9130	1420
	Feb.	28.0	2360	7320	854	1400	2560	427	287	629	63	1830	2150	1230	160	291	49	1020	1140	670	841	1540	257	5350	6010	3540
	Mar.	31.0	1360	1710	701	1990	2580	1800	453	636	399	1670	1960	1200	227	294	205	835	992	555	1200	1550	1080	4400	5230	2930
	Apr.	30.0	1330	1530	1150	1860	2200	1480	422	516	310	1910	1940	1170	215	250	169	771	942	627	1130	1320	890	4060	4970	3300
	May	31.0	1630	13460	503	1060	2120	270	20.	493	1.	881	2630	560	122	242	31	535	1890	305	660	1270	192	2800	9970	1610
	June	30.0	5250	23330	1330	550	1590	213	86	340	28	1220	2260	703	63	181	27	892	2030	612	331	955	140	4680	10710	3230
	July	31.0	5020	10030	1250	572	1560	367	90	338	51	1220	1850	832	65	180	42	879	1290	539	344	951	221	4650	6780	2840
	Aug.	31.0	2710	6060	806	823	1590	425	146	319	62	1050	1563	706	96	181	49	688	1050	380	496	954	256	3610	5507	2010
	Sept	30.0	3780	10570	1630	658	1180	302	108	231	39	1100	2280	760	106	135	35	706	1600	466	396	710	182	4030	8420	2460
SUMMARY		365.0	2860	24330	434	929	2680	213	169	668	28	1290	2780	541	136	305	27	811	2030	269	559	1610	140	4280	10710	1420

MONTHLY SUMMARY OF CONTINUOUS RECORDED FLOW AND QUALITY DATA

River Basin: Arkansas Station Numbers: PRS: 224 USGS: 1442.00

Stream and Location: Little Arkansas River at Valley Center, Kansas
Lat. 37°49'56", long. 97°23'16", W-1/2, Sec. 36, T.25 S., R.1 W., at bridge on County Hwy, 1/2 mi. west of Valley Center, Sedgwick County, Kans., and 15.6 river miles above mouth.

Main Stream Flow: 252 cfs; Range: 25-660 cfs Years: 40

NOTES:

Equations Used to Compute Concentrations from Specific Conductance

	Number Samples	Equations	Std. Error	Correl. Coeff.
Dissolved Solids:	21	TDS = 0.6108 Sp. C.	92.5326	0.9773
Chlorides:	97	Log Cl = 1.3336 Log Sp. C. - 1.7652	0.0751	0.9811
Sulfates:	97	SO_4 = 0.0374 Sp. C. + 22	11.5756	0.7804

Remarks: Records good. Stratification nil. Instantaneous conductivity ranges 50-2800 micromhos. The flow recurrence intervals for water years 1961 and 1962 are 2.96 and 6.16 respectively.

Year	Month	Number of Days of Specific Conductance Record	STREAM FLOW Cubic Feet/Second Mean	Extremes Max. Day	Extremes Min. Day	SPECIFIC CONDUCTANCE Micromhos/Centimeter @ 25° C Wt. Mean	Extremes Max. Day	Extremes Min. Day	CHLORIDES (Cl) Milligrams/Liter Wt. Mean	Extremes Max. Day	Extremes Min Day	CHLORIDES (Cl) Tons/Day Wt. Mean	Extremes Max. Day	Extremes Min. Day	SULFATES (SO_4) Milligrams/Liter Wt. Mean	Extremes Max. Day	Extremes Min. Day	SULFATES (SO_4) Tons/Day Wt. Mean	Extremes Max. Day	Extremes Min. Day	DISSOLVED SOLIDS (103° C) Milligrams/Liter Wt. Mean	Extremes Max. Day	Extremes Min. Day	DISSOLVED SOLIDS (103° C) Tons/Day Wt. Mean	Extremes Max. Day	Extremes Min. Day
1960	July																									
	Aug.																									
	Sept																									
SUMMARY																										
1960	Oct.																									
	Nov.																									
	Dec.																									
1961	Jan.																									
	Feb.																									
	Mar.																									
	Apr.																									
	May																									
	June	15.1	194	832	57	716	1260	393	110	238	50	34	98	20	48	68	36	15	33	8	438	770	240	135	317	76
	July	31.0	334	3860	49	300	829	136	35	135	12	31	179	16	33	52	27	29	276	7	183	506	83	165	933	61
	Aug.	23.7	89	392	50	885	1170	438	150	215	57	30	39	13	54	65	38	11	16	8	541	716	268	110	137	62
	Sept	29.4	383	4550	43	254	885	118	26	150	10	49	124	9	31	54	26	32	317	5	155	541	72	162	884	40
SUMMARY		99.2	250	4550	43	347	1260	118	42	238	10	29	179	9	33	68	26	23	317	5	212	770	72	146	933	40
1961	Oct.	31.0	245	2280	61	357	937	143	44	160	13	29	80	15	35	56	27	23	165	7	217	572	87	144	536	62
	Nov.	30.0	450	1970	98	368	863	247	45	143	27	55	153	30	35	53	31	43	166	13	225	527	151	272	850	120
	Dec.	31.0	91	106	77	1080	1180	908	190	220	154	47	57	40	61	65	55	15	18	13	658	722	555	162	193	135
1962	Jan.	31.0	558	3870	46	284	1250	132	32	236	11	48	147	28	33	68	26	50	284	10	173	763	81	260	983	100
	Feb.	28.0	204	1180	75	685	1450	222	104	288	21	57	73	37	47	75	30	26	95	12	419	884	136	230	431	128
	Mar.	31.0	85	144	61	1350	2090	1050	256	477	186	59	182	38	72	99	60	16	38	11	825	1280	642	190	490	123
	Apr.	30.0	73	117	63	1330	2110	1010	252	480	176	49	137	32	72	100	59	14	30	11	814	1290	615	160	376	112
	May	31.0	942	11400	39	146	1510	71	13	303	5	33	154	20	27	77	24	68	742	6	89	922	43	226	1330	69
	June	30.0	2370	18850	161	158	1020	77	15	176	6	96	356	38	28	59	24	179	1260	20	96	620	47	613	2760	160
	July	31.0	548	2170	114	406	1510	235	52	303	25	77	172	40	37	78	30	54	177	16	248	923	144	366	926	150
	Aug.	31.0	89	248	36	780	1110	512	124	202	70	30	102	11	50	63	41	12	35	5	477	679	313	114	364	46
	Sept	30.0	261	1170	52	373	767	261	46	122	28	32	90	12	35	50	31	25	98	6	228	469	160	160	503	49
SUMMARY		365.0	493	18850	36	298	2110	71	34	480	5	45	356	11	33	100	24	44	1260	5	182	1290	43	241	2760	46

MONTHLY SUMMARY OF CONTINUOUS RECORDED FLOW AND QUALITY DATA

River Basin: Arkansas Station Numbers: PHS: 7[illegible] USGS: 1431.[illegible]

Stream and Location: Arkansas River near Hutchinson, Kansas
Lat. 37°56'42", long. 97°54'29", on west line of Sec. 21, T. 24 S., R. 4 E., at bridge on Hwy 96, 10 mi. north of Haven, Kansas and at river mile 800.3.

Main Stream Flow: 780 cfs Range: 544-1070 cfs Years: 3

Equations Used to Compute Concentrations From Specific Conductance

	Number Samples	Equations	Std. Error	Correl. Coeff.
Dissolved Solids:	25	DS = 0.6247 Sp. C	106	0.9541
Chlorides:	183	Log Cl = 1.2511 Log. Sp.C.-1.5014	0.0625	0.9740
Sulfates:	183	SO_4 = 0.1446 Sp. C	111	0.6640

Remarks: Records good. Frequent minor stratification. Instantaneous conductivity range 20-5500 micromhos. The flow recurrence intervals for water years 1961 and 1962 are 1.2 and 2.0 respectively.

Year	Month	Number of Days of Specific Conductance Record	STREAM FLOW Cubic Feet/Second Mean	Extremes Max. Day	Extremes Min. Day	SPECIFIC CONDUCTANCE Micromhos/Centimeter @ 25° C Wt. Mean	Extremes Max. Day	Extremes Min. Day	CHLORIDES (Cl) Milligrams/Liter Wt. Mean	Extremes Max. Day	Extremes Min. Day	CHLORIDES (Cl) Tons/Day Wt. Mean	Extremes Max. Day	Extremes Min. Day	SULFATES (SO_4) Milligrams/Liter Wt. Mean	Extremes Max. Day	Extremes Min. Day	SULFATES (SO_4) Tons/Day Wt. Mean	Extremes Max. Day	Extremes Min. Day	DISSOLVED SOLIDS (103° C) Milligrams/Liter Wt. Mean	Extremes Max. Day	Extremes Min. Day	DISSOLVED SOLIDS (103° C) Tons/Day Wt. Mean	Extremes Max. Day	Extremes Min. Day
1960	July	12.4	546	808	284	1630	2200	325	362	489	72	403	610	89	237	319	47	263	398	58	1020	1380	203	1130	1720	250
	Aug.	31.0	341	1730	196	1660	2480	398	388	550	88	338	671	254	240	359	56	221	438	166	1040	1550	248	950	1890	715
	Sept	30.0	296	986	159	1720	2820	456	381	626	101	304	485	257	249	409	66	199	317	168	1070	1760	284	856	1370	725
SUMMARY		73.0	393	1730	159	1660	2820	325	369	626	72	335	671	89	241	409	47	219	438	58	1040	1760	203	943	1890	250
1960	Oct.	31.0	205	316	152	2240	3030	824	89	705	141	270	342	114	324	439	120	179	223	96	1400	1890	515	773	962	414
	Nov.	30.0	246	276	214	2370	2610	1850	527	590	385	349	411	287	344	378	269	228	266	198	1480	1630	1158	981	1150	855
	Dec.	31.0	269	316	191	2670	3250	1940	611	780	408	43	553	305	388	471	281	281	343	201	1670	2030	1212	1210	1480	865
1961	Jan.	31.0	256	314	114	2710	3580	2250	621	875	492	428	547	229	393	519	327	271	337	140	1690	2240	1409	1170	1450	601
	Feb.	28.0	331	422	212	2450	2770	1260	548	638	238	489	686	160	355	401	182	317	427	122	1530	1730	785	1370	1840	528
	Mar.	31.0	369	676	281	2400	2960	1370	535	690	265	530	721	382	348	429	199	346	457	264	1500	1850	857	1490	1970	1140
	Apr.	30.0	404	631	327	2460	2880	1780	550	670	368	599	852	465	355	417	258	389	546	306	1530	1800	1110	1680	2350	1310
	May	31.0	868	2780	330	1500	2370	566	296	522	88	692	1670	452	217	344	82	508	1230	299	936	1480	354	2190	5130	1290
	June	30.0	791	2280	342	1160	2280	465	214	500	68	456	1030	78	168	331	67	358	791	76	723	1430	291	1540	3410	328
	July	31.0	553	1440	228	1020	2410	388	184	535	55	274	520	74	148	349	54	221	410	72	638	1510	242	952	1770	311
	Aug.	31.0	1316	3220	337	782	1910	312	131	400	41	465	662	351	113	277	45	402	565	249	488	1190	195	1730	2440	1070
	Sept	30.0	1010	2700	439	829	1730	360	142	354	46	387	490	262	120	250	49	328	397	226	518	1080	212	1410	1710	975
SUMMARY		365.0	552	3220	114	1470	3580	312	290	875	41	432	1670	74	213	519	45	317	1230	72	920	2240	195	1370	5130	311
1961	Oct.	31.0	278	401	222	2040	2500	1580	437	560	317	328	393	263	296	361	229	222	277	190	1280	1560	988	958	1190	821
	Nov.	30.0	459	838	314	1960	2500	753	415	560	125	514	683	281	284	361	109	352	435	214	1230	1560	471	1520	1870	922
	Dec.	31.0	388	585	154	2620	3350	2440	654	808	545	683	1070	316	408	486	354	426	666	192	1760	2090	1525	1840	2870	830
1962	Jan.	31.0	524	2320	96	1790	3860	930	370	960	163	522	1250	181	260	560	135	366	941	113	1120	2410	581	1580	4060	485
	Feb.	28.0	668	1430	240	2500	3300	1680	563	792	342	983	1470	515	383	478	243	634	1000	309	1560	2060	1050	2730	4310	1330
	Mar.	31.0	434	555	284	2770	3380	2360	639	815	522	748	899	624	401	490	342	469	573	374	1730	2110	1480	2020	2470	1610
	Apr.	30.0	426	704	352	2320	2890	1060	513	670	192	589	821	305	337	419	134	386	512	293	1450	1810	865	1670	2210	1260
	May	31.0	330	515	215	2280	2920	583	500	680	91	444	578	127	330	423	85	293	372	117	1420	1820	364	1270	1600	505
	June	30.0	611	915	323	1840	2430	666	383	542	103	630	888	191	267	352	94	439	591	175	1150	1520	404	1890	2550	756
	July	31.0	2060	3710	665	706	1630	370	115	328	51	637	905	512	102	237	54	565	749	378	440	1020	231	2440	3230	1630
	Aug.	31.0	1490	5000	445	773	1750	371	129	358	51	518	715	375	112	253	54	450	737	296	483	1090	232	1940	3180	1280
	Sept	30.0	1110	3320	479	882	1800	351	153	372	48	457	678	332	128	260	51	381	468	269	551	1120	219	1640	2100	1160
SUMMARY		365.0	729	5000	96	1440	3860	351	283	960	48	557	1470	127	209	560	51	412	1000	113	902	2410	219	1780	4310	485

MONTHLY SUMMARY OF CONTINUOUS RECORDED FLOW AND QUALITY DATA

River Basin: Arkansas Station Numbers: PHS: 767 USGS: 1426.20

Stream and Location: Rattlesnake Creek near Raymond, Kansas
Lat. 38°13'50", long. 98°25'00", Sec. 15, T.21S., R. 10 W., 3½ mi. south of Raymond, Rice County, Kans., and 5.4 mi. upstream from mouth.

Main Stream Flow: 70 cfs; Range: 70-71 cfs Years: 2

NOTES:

Equations Used to Compute Concentrations From Specific Conductance

	Number Samples	Equations	Std. Error	Correl. Coeff.
Dissolved Solids:	19	DS = 0.5609 Sp. C.	116	0.9677
Chlorides:	152	Log Cl = 1.1180 Log Sp. C. - 0.9335	0.0235	0.9864
Sulfates:	152	SO4 = 0.0380 Sp. C.	21'	0.8724

Remarks: Records fair. Occasional minor stratification. Instantaneous conductivity range 50-11,500 micromhos. The flow recurrence intervals for water years 1961 and 1962 are 4.0 and 1.33 respectively.

Year	Month	Number of Days of Specific Conductance Record	STREAM FLOW Cubic Feet/Second Mean	Extremes Max. Day	Extremes Min. Day	SPECIFIC CONDUCTANCE Micromhos/Centimeter @ 25° C Wt. Mean	Extremes Max. Day	Extremes Min. Day	CHLORIDES (Cl) Milligrams/Liter Wt. Mean	Extremes Max. Day	Extremes Min. Day	CHLORIDES (Cl) Tons/Day Wt. Mean	Extremes Max. Day	Extremes Min. Day	SULFATES (SO_4) Milligrams/Liter Wt. Mean	Extremes Max. Day	Extremes Min. Day	SULFATES (SO_4) Tons/Day Wt. Mean	Extremes Max. Day	Extremes Min. Day	DISSOLVED SOLIDS (103° C) Milligrams/Liter Wt. Mean	Extremes Max. Day	Extremes Min. Day	DISSOLVED SOLIDS (103° C) Tons/Day Wt. Mean	Extremes Max. Day	Extremes Min. Day
1960	July	24.9	38	46	25	3550	4280	2760	1080	1330	805	106	141	79	135	163	104	13	18	10	1990	2400	1530	195	261	146
	Aug.	31.0	18	31	12	3830	5360	2420	1160	1690	710	57	82	41	143	204	92	7	10	5	2140	3000	1350	104	150	75
	Sept	30.0	10	21	6	4750	5910	3800	1500	1910	1160	30	91	26	181	224	144	5	11	3	2660	3310	2130	75	162	46
	SUMMARY	86.0	22	46	6	3850	5910	2420	1170	1910	710	65	141	26	144	224	92	8	18	3	2160	3310	1350	120	261	46
1960	Oct.	31.0	31	68	8	3520	6140	2280	1070	1980	660	90	164	44	134	233	87	11	21	5	1970	3440	1280	165	302	76
	Nov.	30.0	48	64	31	3530	4310	2850	1080	1350	849	140	162	114	136	164	108	16	20	14	1980	2410	1600	256	294	203
	Dec.	31.0	59	91	36	4730	7720	3730	1500	2580	1150	239	383	116	180	293	142	29	46	14	2650	4320	2090	423	674	211
1961	Jan.	31.0	51	65	31	4380	6030	3550	1370	1960	1070	190	272	117	166	229	135	23	33	14	2450	3370	1990	339	478	211
	Feb.	28.0	72	95	38	4280	5420	3020	1360	1740	905	259	415	108	162	208	115	31	49	14	2390	3060	1690	463	727	199
	Mar.	31.0	82	125	55	4120	5140	3570	1260	1660	1090	282	478	191	136	195	136	34	57	24	2310	2880	2000	507	845	346
	Apr.	30.0	75	107	51	4240	5600	3615	1330	1810	1110	268	435	177	161	213	137	33	52	22	2380	3140	2020	481	769	322
	May	31.0	102	324	36	3700	4670	3330	1140	1410	1012	311	973	116	141	170	127	39	121	14	2070	2510	1870	568	1780	211
	June	30.0	45	86	22	4150	5950	2960	1290	1930	880	168	296	97	158	226	112	19	35	12	2330	3330	1650	285	520	172
	July	31.0	68	266	18	2180	4850	837	629	1560	218	115	403	65	83	184	32	15	51	8	1220	2720	469	223	750	118
	Aug.	31.0	155	463	43	2140	3990	966	617	1240	252	258	353	136	81	152	37	34	49	17	1200	2240	541	502	721	245
	Sept	30.0	50	94	32	2670	3270	2220	791	990	641	96	162	75	102	126	84	12	21	10	1500	1830	1240	181	313	141
	SUMMARY	365.0	70	463	8	3670	7720	837	1060	2580	218	200	973	44	132	293	32	25	121	5	1950	4320	469	367	1780	76
1961	Oct.	31.0	33	49	20	3200	4160	2730	968	1290	809	86	132	58	122	157	104	11	16	7	1790	2320	1530	160	239	107
	Nov.	30.0	102	160	57	4170	4820	3510	1300	1530	1073	357	616	199	158	183	134	43	74	24	2360	2700	1970	662	1090	357
	Dec.	25.6	82	136	43	4050	4750	3280	1260	1500	993	278	532	140	156	181	125	34	64	17	2270	2660	1840	501	942	253
1962	Jan.	31.0	83	201	41	3930	7230	2720	1220	2400	807	271	581	108	149	275	104	33	72	13	2200	4050	1530	490	10[illegible]	197
	Feb.	28.0	106	190	42	4040	5660	3530	1260	1820	1080	360	557	157	156	216	136	44	69	19	2260	3160	1980	649	1020	279
	Mar.	31.0	74	91	48	3930	4710	3620	1220	1490	1060	242	285	166	149	179	130	30	35	20	2200	2660	1920	437	515	297
	Apr.	30.0	58	72	48	3780	4980	3200	1170	1590	988	183	216	151	144	189	122	23	26	19	2120	2790	1790	333	387	279
	May	31.0	31	56	13	4240	5770	3520	1320	1870	1070	112	195	59	161	219	134	14	24	7	2370	3230	1970	201	349	104
	June	30.0	90	160	21	3660	5530	2790	1120	1780	830	271	432	88	139	210	108	34	54	11	2050	3090	1560	495	758	156
	July	31.0	62	98	42	4010	4830	3470	1250	1530	1060	207	308	156	152	186	132	25	38	19	2250	2710	1640	373	556	280
	Aug.	31.0	39	67	15	2930	4860	2300	876	1460	668	93	152	51	111	176	87	12	19	6	1660	2600	1290	174	280	94
	Sept	30.0	81	206	39	2230	3390	1457	666	1030	401	141	223	88	85	129	55	18	31	11	1250	1900	816	272	452	165
	SUMMARY	349.0	70	206	13	3720	7230	1457	1150	2400	401	215	616	51	141	275	55	28	74	8	2090	4050	816	391	1090	94

MONTHLY SUMMARY OF CONTINUOUS RECORDED FLOW AND QUALITY DATA

River Basin: Arkansas Station Numbers: PNS: 220 USGS: 1613.00

Stream and location: Arkansas River at Great Bend, Kansas
Lat. 38°21', long. 98°46', SE¼,Sec. 33, T.19 S.,R.13 W., at bridge on Hwy 281, ½ mile south of Great Bend, Barton County, Kansas, and at river mile 673.2.

Main Stream Flow: 453 cfs: Range: 88-1570 CFS Years: 22

Remarks: Records fair, Occasional minor stratification, Instantaneous conductivity ranges 50-5750 micrombos. The flow recurrence intervals for water years 1961 and 1962 are 1.26 and 1.76 respectively.

NOTES:

Equations Used to Compute Concentrations From Specific Conductance

	Number Samples		Equations	Std. Error	Correl. Coeff.
Dissolved Solids:	26	DS	= 0.8095 Sp.C.	119.9024	0.9786
Chlorides:	213	Cl	= 0.0442 Sp.C.	7.4502	0.9499
Sulfates:	211	Log SO_4	= 1.4757 log Sp.C.-1.9190	0.0468	0.9873

Year	Month	Number of Days of Specific Conductance Record	STREAM FLOW Cubic Feet/Second Mean	Extremes Max. Day	Extremes Min. Day	SPECIFIC CONDUCTANCE Micrombos/Centimeter at 25° C Wt. Mean	Extremes Max. Day	Extremes Min. Day	CHLORIDES (Cl) Milligrams/Liter Wt. Mean	Extremes Max. Day	Extremes Min. Day	CHLORIDES (Cl) Tons/Day Wt. Mean	Extremes Max Day	Extremes Min. Day	SULFATES (SO_4) Milligrams/Liter Wt. Mean	Extremes Max. Day	Extremes Min. Day	SULFATES (SO_4) Tons/Day Wt. Mean	Extremes Max. Day	Extremes Min. Day	DISSOLVED SOLIDS (105° C) Milligrams/Liter Wt. Mean	Extremes Max. Day	Extremes Min. Day	DISSOLVED SOLIDS (105° C) Tons/Day Wt. Mean	Extremes Max. Day	Extremes Min. Day
1959	July	9.8	166	244	88	1810	2040	1960	79	90	64	37	59	16	765	910	560	358	602	135	1460	1650	1180	684	1080	285
	Aug.	25.2	35	103	11	1550	1640	1280	68	72	56	7	20	2	620	660	460	66	184	16	1250	1330	1030	133	344	34
	Sept	30.0	12	61	3	1370	1550	1100	60	68	49	2	8	1	513	610	372	16	69	4	1110	1260	893	34	138	9
	SUMMARY	65.0	71	244	3	1660	2040	1100	71	90	49	9	59	1	680	910	372	86	602	4	1340	1650	893	170	1080	9
1960	Nov.	31.0	62	128	11	1210	1390	1100	53	61	48	9	18	2	424	524	371	70	165	14	975	1126	890	162	334	32
	Dec.	31.0	86	93	79	1360	1410	1240	60	62	55	14	15	13	505	535	442	117	127	108	1100	1141	1000	255	275	244
1961	Jan.	31.0	99	151	60	1430	1700	1300	63	75	57	17	26	12	546	705	474	146	227	114	1160	1370	1050	308	477	222
	Feb.	28.0	100	122	44	1470	1560	1370	65	68	60	17	22	8	571	612	513	153	195	66	1190	1250	1110	321	402	142
	Mar.	31.0	124	163	73	1690	1900	730	75	84	32	25	32	10	701	831	202	235	314	10	1370	1540	591	458	582	182
	Apr.	31.0	124	141	107	1480	2000	1310	65	88	58	22	28	19	572	896	480	191	286	168	1194	1620	1060	598	517	349
	May	30.0	116	148	97	1400	1500	1190	62	66	53	19	23	16	529	588	416	166	207	142	1132	1220	963	354	430	302
	June	31.0	189	737	99	1030	1420	515	44	63	23	23	46	17	338	540	121	172	237	162	836	1150	417	426	838	305
	July	30.0	384	965	108	768	1480	416	34	65	18	35	83	17	218	572	88	225	522	135	621	1190	337	643	1520	317
	Aug.	31.0	271	1150	46	532	1180	280	24	52	12	18	44	2	127	412	49	93	198	46	431	955	227	315	817	111
	Sept	31.0	535	2350	7	401	1050	210	18	46	9	26	69	1	84	345	32	121	278	6	325	847	170	468	1260	14
	SUMMARY	30.0	171	592	69	924	1170	424	41	51	19	19	40	9	287	404	91	132	219	72	748	943	343	345	729	171
		365.0	188	2350	7	894	2000	210	40	88	9	20	83	1	273	815	32	139	522	6	724	1620	170	368	1520	14
1961	Oct.	31.0	58	118	39	1180	1250	1080	52	55	47	8	15	5	409	447	359	64	115	42	952	1010	870	149	276	99
	Nov.	30.0	142	182	99	1570	2250	1100	69	99	48	26	48	13	625	1070	369	239	514	98	1270	1820	886	485	874	236
	Dec.	31.0	133	211	46	2260	2610	1790	99	106	79	35	58	12	1060	1180	761	378	636	123	1810	1950	1650	648	1070	229
1962	Jan.	31.0	167	396	65	2230	3000	1670	98	133	73	44	78	18	1050	1630	685	473	729	205	1800	2630	1350	812	1440	340
	Feb.	28.0	251	388	91	2330	2740	1770	103	121	78	70	90	24	1120	1420	749	759	1060	253	1890	2210	1630	1280	1650	436
	Mar.	31.0	225	257	91	2440	2710	1730	108	120	76	66	77	22	1200	1400	720	727	892	230	1970	2190	1400	1200	1420	410
	Apr.	30.0	210	250	190	1900	2600	1650	84	115	64	48	77	33	832	1320	555	471	890	287	1540	2100	1170	871	1410	606
	May	31.0	117	189	66	1500	1590	1130	66	70	50	21	35	12	587	638	388	185	311	108	1210	1290	918	384	634	220
	June	30.0	239	474	155	1460	2130	730	64	94	32	41	54	21	562	980	202	363	560	163	1180	1720	591	761	988	388
	July	31.0	685	1740	246	525	1130	260	23	50	11	42	69	26	125	386	44	231	292	154	425	915	210	785	1260	486
	Aug.	31.0	938	4920	142	429	1170	200	19	52	9	48	133	19	92	408	30	232	452	141	347	949	162	877	2360	340
	Sept	30.0	743	4170	133	453	1180	245	20	52	11	40	121	17	100	410	40	200	450	122	366	954	198	735	2230	310
	SUMMARY	365.0	326	4920	39	1040	3000	200	46	133	9	40	133	5	341	1630	30	300	1060	42	861	2630	162	739	2360	99

MONTHLY SUMMARY OF CONTINUOUS RECORDED FLOW AND QUALITY DATA

River Basin: Red Station Numbers: FMS: 529 USGS: 3370.00

Stream and location: Red River at Index, Arkansas
Lat. 33°33'05", long. 94°02'25", SW¼, Sec. 7, T.14 S., R.28 W., on bridge of U. S. Hwy 71 near Index, Hempstead County, Arkansas, and at river mile 485.3

Main Stream Flow: 12685 cfs Range: 4839-25310 cfs Years: 26

Remarks: Records very good. Occasional minor variation. Instantaneous conductivity range 230-2050 micromhos. The flow recurrence intervals for water years 1961-1962 are 1.79 and 1.93 respectively.

Equations Used to Compute Concentrations From Specific Conductance

	Number Samples	Equations	Std. Error	Correl. Coeff.
Dissolved Solids:	40	TDS = 0.6200 Sp. C.	37	0.9913
Chlorides:	135	Cl = 0.2195 Sp. C. - 43	14	0.9922
Sulfates:	139	SO_4 = 0.1284 Sp. C.	17	0.9716

Year	Month	Number of Days of Specific Conductance Record	STREAM FLOW Cubic Feet/Second Mean	Extremes Max. Day	Extremes Min. Day	SPECIFIC CONDUCTANCE Micromhos/Centimeter² @ 25° C Wt. Mean	Extremes Max. Day	Extremes Min. Day	CHLORIDES (Cl) Milligrams/Liter Wt. Mean	Extremes Max. Day	Extremes Min. Day	CHLORIDES (Cl) Tons/Day Wt. Mean	Extremes Max. Day	Extremes Min. Day	SULFATES (SO_4) Milligrams/Liter Wt. Mean	Extremes Max. Day	Extremes Min. Day	SULFATES (SO_4) Tons/Day Wt. Mean	Extremes Max. Day	Extremes Min. Day	DISSOLVED SOLIDS (105° C) Milligrams/Liter Wt. Mean	Extremes Max. Day	Extremes Min. Day	DISSOLVED SOLIDS (105° C) Tons/Day Wt. Mean	Extremes Max. Day	Extremes Min. Day
1960	July	31.0	7820	23600	3790	966	1420	319	161	267	35	3390	7220	1590	121	181	41	2550	5760	1650	587	877	198	12400	27900	7990
	Aug.	31.0	4860	10600	2710	1080	1650	434	190	329	53	2480	5010	742	138	211	56	1800	3640	748	667	1020	269	8730	17600	3620
	Sept	30.0	3600	7590	2140	1670	1820	724	284	376	108	2760	5190	1480	188	233	93	1820	3550	1130	910	1130	449	8830	17200	5450
	SUMMARY	92.0	5430	23600	2140	1130	1820	319	201	376	35	2890	7220	742	144	233	41	2060	5760	748	699	1130	198	9990	27900	3620
1960	Nov.	31.0	11490	30000	2350	1540	1960	455	293	387	57	9080	31030	515	198	251	38	6130	20210	532	954	1220	282	29550	97510	2550
	Nov.	30.0	7240	23270	3260	1750	1900	1444	342	374	274	6670	21490	3040	225	263	185	4390	14140	2010	1090	1180	894	21210	68240	9740
	Dec.	31.0	18830	66130	2520	616	1720	287	92	334	20	4670	8500	1970	79	220	37	4010	7320	1320	382	1070	178	19390	35350	6400
1961	Jan.	31.0	11550	29530	6280	1070	1730	428	192	337	51	5970	10740	2140	138	222	55	4290	8040	2280	665	1070	265	20690	38720	10950
	Feb.	28.0	9380	25090	4230	823	1730	342	138	338	22	3490	7350	646	106	222	44	2680	5380	890	510	1080	212	12890	26030	4280
	Mar.	31.0	10190	43390	4600	723	1200	429	116	220	51	3190	7850	1230	93	134	55	2560	7500	1060	668	744	266	12310	36320	5010
	Apr.	30.0	18790	61330	6140	902	1610	385	135	309	42	7850	13610	2930	116	205	49	5880	10930	1990	559	995	239	28310	52820	9650
	May	31.0	10530	43800	3730	705	1570	242	112	301	10	3180	11000	333	91	201	31	2580	9340	845	437	972	150	12400	45290	4070
	June	30.0	5460	11620	3260	1120	1840	555	203	317	79	2990	5610	710	144	210	71	2120	3670	647	694	1020	344	10210	17710	3140
	July	31.0	8410	25280	2620	959	1920	483	168	377	63	3810	8110	1350	123	265	62	2790	6300	1250	595	1190	300	13480	30280	6060
	Aug.	31.0	4000	5780	2420	1540	1940	862	294	382	146	3170	4440	1806	197	248	110	2120	2890	1230	952	1200	534	10250	13950	5940
	Sept	30.0	5240	16030	2220	1490	2020	790	284	440	130	4010	10340	2540	192	259	101	2710	6850	1750	925	1250	490	13060	33090	8460
	SUMMARY	365.0	10490	66130	2220	1010	2020	242	178	440	10	4850	31030	333	129	259	31	3510	20210	532	623	1250	150	16970	97510	2550
1961	Oct.	31.0	7640	15620	3850	1500	1980	500	286	392	67	5890	13460	2330	193	254	64	3970	8940	1720	931	1230	310	19170	43160	8330
	Nov.	30.0	13160	53160	3080	784	2000	420	129	396	49	4570	8530	1600	100	256	54	3550	8390	1150	486	1240	260	17230	40720	5550
	Dec.	31.0	13660	26630	3100	825	1710	444	138	332	54	3820	11340	3030	104	219	57	4470	7530	2120	512	1060	275	21580	34420	10250
1962	Jan.	31.0	11530	33600	3770	771	1470	385	126	280	42	3920	7220	1740	99	189	49	3080	5470	1460	478	914	238	14850	26400	7050
	Feb.	28.0	9460	27300	3230	679	1210	359	106	221	36	2700	4820	1180	87	154	46	2220	4260	905	421	747	222	10730	20640	4390
	Mar.	31.0	7800	18690	3550	558	1280	243	79	238	10	1660	3930	280	72	166	31	1510	3110	856	346	794	150	7270	15080	4170
	Apr.	30.0	14430	30300	5960	498	1100	255	66	199	13	2570	3480	550	64	141	33	2690	4270	1230	309	682	158	12020	20650	3910
	May	31.0	6320	30000	1800	622	1430	257	94	271	13	1600	1220	980	80	183	33	1360	2750	718	386	887	159	6580	13280	3470
	June	30.0	25250	47960	1840	1420	1930	263	268	380	15	18240	39410	370	182	246	34	12390	26230	1160	877	1190	163	59690	126900	5450
	July	31.0	6890	15330	3990	1470	1760	886	280	342	151	5200	10380	3010	189	225	113	3510	7030	2270	912	1090	549	16930	33950	10930
	Aug.	31.0	5000	8990	2860	1530	1780	1060	293	347	189	3950	7210	2040	197	228	135	2650	4830	1430	949	1100	654	12780	23320	6870
	Sept	30.0	8460	31350	2660	897	1520	313	156	290	26	3510	8610	682	115	194	40	2620	6800	872	556	940	194	12680	32840	4250
	SUMMARY	345.0	10960	53160	1800	965	2000	263	169	396	10	4980	39410	280	126	256	31	3650	26230	718	598	1240	150	17610	126900	5470

MONTHLY SUMMARY OF CONTINUOUS RECORDED FLOW AND QUALITY DATA

River Basin: Red Station Numbers: FWS: 527 USGS: 3355.00

Stream and location: Red River at Arthur City, Texas
Lat. 33°52'32", long. 95°30'08", NW¼, Sec. 11, T.8 S., R.17 E., on bridge of U. S. Hwy 271 near Arthur City, Lamar County, Texas, and at river mile 633.1 above mouth.

Main Stream Flow: 8670 cfs Range: 2480-21500 cfs Years: 32

Equations Used to Compute Concentrations From Specific Conductance

	Number Samples	Equations	Std. Error	Correl. Coeff.
Dissolved Solids:	41	TDS = 0.6244 Sp. C.	41.	0.9896
Chlorides:	144	Log Cl = 1.3433 Log Sp. C.-1.8189	0.0475	0.9855
Sulfates:	144	SO_4 = 0.1280 Sp. C.	22	0.9494

Remarks: Records good. Stream uniformity is affected by flow from Clear Boggy Creek and Blue River. Recorded conductivity readings are usually higher than the representative stream average. Instantaneous conductivity range 140-2210 micromhos. The flow recurrence intervals for water years 1961 and 1962 are 1.94 and 2.07 respectively.

Year	Month	Number of Days of Specific Conductance Record	STREAM FLOW Cubic Feet/Second Mean	Extremes Max. Day	Extremes Min. Day	SPECIFIC CONDUCTANCE Micromhos/Centimeter @ 75° C Wt. Mean	Extremes Max. Day	Extremes Min. Day	CHLORIDES (Cl) Milligrams/Liter Wt. Mean	Extremes Max. Day	Extremes Min. Day	CHLORIDES (Cl) Tons/Day Wt. Mean	Extremes Max. Day	Extremes Min. Day	SULFATES (SO_4) Milligrams/Liter Wt. Mean	Extremes Max. Day	Extremes Min. Day	SULFATES (SO_4) Tons/Day Wt. Mean	Extremes Max. Day	Extremes Min. Day	DISSOLVED SOLIDS (103° C) Milligrams/Liter Wt. Mean	Extremes Max. Day	Extremes Min. Day	DISSOLVED SOLIDS (103° C) Tons/Day Wt. Mean	Extremes Max. Day	Extremes Min. Day
1960	July	22.6	5500	11500	1860	1510	1620	1240	282	311	216	3880	5650	1090	193	208	158	2660	3780	800	942	1010	771	12900	18400	3900
	Aug.	20.8	2870	5610	772	1330	1640	768	240	314	114	2110	3790	697	170	209	98	1490	2520	516	827	1020	479	7270	12300	2520
	Sept	19.3	2750	4290	559	1430	1850	487	268	371	62	1870	3250	324	183	237	62	1270	2160	316	892	1160	304	6210	10500	1540
SUMMARY		63.0	3660	11500	559	1440	1850	487	267	371	62	2670	5650	324	184	237	62	1840	3780	316	899	1160	304	8990	18400	1540
1960	Oct.	31.0	12320	31500	938	1740	1930	630	342	393	88	11360	32940	488	223	347	81	7410	20600	407	1090	1210	392	36100	100700	1980
	Nov.	30.0	4870	19720	1340	1790	1930	1450	336	397	268	4670	20770	1100	230	249	186	3020	13040	743	1120	1220	905	14700	63580	3620
	Dec.	31.0	10900	31400	2260	1080	1870	401	180	375	48	5290	12670	973	138	239	51	4050	8070	791	674	1160	250	19800	39430	3850
1961	Jan.	31.0	7720	16950	4850	1470	1900	589	273	383	80	5680	7870	2610	188	243	75	3910	5630	2450	917	1180	367	19090	27410	12020
	Feb.	28.0	6180	17350	2380	1060	1790	553	175	353	73	2920	4780	865	135	228	71	2250	4210	761	661	1110	345	11010	20600	3700
	Mar.	31.0	5700	16910	1510	1270	1710	750	225	332	110	3460	19040	599	163	218	96	2500	14140	517	795	1060	468	12210	68900	2530
	Apr.	30.0	10190	29580	2210	1920	1840	1050	284	369	175	7800	16210	1860	194	236	134	5330	11980	1230	946	1150	655	25990	58340	6030
	May	31.0	5020	17230	2000	1180	1960	557	202	400	74	2730	7020	587	151	251	71	2060	5630	556	734	1220	347	9920	27390	2720
	June	30.0	3960	10930	1750	1510	1980	799	283	406	121	3020	5350	1200	193	256	102	2060	3560	879	943	1240	499	10060	17360	4290
	July	31.0	4460	11790	1540	1600	2000	928	305	412	148	3830	8410	1360	205	256	119	2570	5830	900	998	1250	579	12530	28370	4380
	Aug.	31.0	2970	5380	1410	1770	2090	1060	349	440	175	2790	4650	1180	226	268	135	1810	2860	816	1108	1300	660	8820	13950	3990
	Sept	30.0	4760	17160	978	1810	2120	1260	359	450	224	4590	16450	898	231	271	162	2950	10570	582	1130	1330	788	14410	51570	2850
SUMMARY		365.0	6600	34910	938	1440	2120	401	271	450	48	4830	32940	488	187	271	51	3330	20600	407	913	1330	250	16270	100700	1980
1961	Oct.	31.0	4850	19250	1930	1810	2210	771	340	471	116	6450	18340	1240	231	383	99	4270	11800	1000	1130	1380	481	20830	57380	4870
	Nov.	30.0	8270	24900	1660	1240	2090	729	218	440	107	4860	10520	1230	159	268	93	3540	8090	848	776	1310	455	17300	39340	4140
	Dec.	31.0	9900	19130	2820	1320	1920	823	235	389	126	6270	17100	1950	168	245	106	4480	8570	1360	822	1200	515	21930	41730	6450
1962	Jan.	31.0	5470	17440	1830	1340	1850	795	242	375	120	3570	6490	789	172	237	102	2540	4800	550	840	1160	496	12390	23360	2690
	Feb.	28.0	3610	10870	1400	1310	1820	592	235	363	80	2290	4210	773	168	233	76	1630	3320	585	820	1140	370	7980	17110	2850
	Mar.	31.0	3500	12180	1270	1060	1730	593	175	338	46	1650	3230	797	135	221	50	1270	2890	571	661	1080	344	6230	14110	2770
	Apr.	30.0	8270	21670	3190	703	1620	285	101	309	30	2250	3240	859	90	207	36	2010	2980	1070	439	1010	177	9790	14630	5310
	May	31.0	2910	11730	1080	1230	1710	496	214	332	63	1680	4020	709	157	218	64	1230	2730	513	767	1060	310	6020	13360	2500
	June	30.0	24400	50830	7910	1520	1880	211	285	360	21	18740	42600	819	194	240	27	12760	28960	964	947	1170	132	62270	140900	4700
	July	31.0	9060	13260	2630	1610	1860	872	308	377	135	6180	6720	2180	205	238	112	2780	4260	1480	1000	1160	544	13610	20710	7260
	Aug.	31.0	5030	8370	2300	1660	1780	1100	321	353	184	4350	6710	3050	212	278	141	2880	4470	1340	1040	1110	685	14050	21800	6570
	Sept	30.0	7470	33090	2160	1030	1750	336	168	347	38	3380	6000	1120	131	234	43	2550	4440	1090	640	1090	210	12890	22600	5330
SUMMARY		365.0	7560	50830	1080	1350	2210	211	243	471	21	4940	42600	709	173	283	27	3520	28960	513	842	1380	132	17120	140900	2500

MONTHLY SUMMARY OF CONTINUOUS RECORDED FLOW AND QUALITY DATA

River Basin: Red

Station Numbers: FHS: 326 USGS: 3350.00

Stream and Location: Clear Boggy Creek near Caney, Oklahoma
Lat. 34°15'02", long. 96°12'16", NW¼ SE¼, Sec. 36, T.3 S., R.10 E., at bridge on U. S. Hwy 69 & 75, 1.3 mi. north of Caney, Atoka County, Oklahoma, and at river mile 24.1 above mouth.

Mean Stream Flow: 309 cfs Range: 34-1670 cfs Years: 19

Equations Used to Compute Concentrations From Specific Conductance

	Number Samples	Equations	Std. Error	Correl. Coeff.
Dissolved Solids:	39	TDS = 0.5970 Sp. C.	31	0.9777
Chlorides:	65	Cl = 0.1235 Sp. C.	20	0.8929
Sulfates:	65	SO_4 = 0.0063 Sp. C. + 28	8	0.173

Remarks: Records poor. Stratification nil. Instantaneous conductivity range 180-1170 micromhos. The flow recurrence interval for water year 1961 is 1.31.

Year	Month	Number of Days of Specific Conductance Record	STREAM FLOW Cubic Feet/Second Mean	Extremes Max. Day	Extremes Min. Day	SPECIFIC CONDUCTANCE Micromhos/Centimeter @ 25° C Wt. Mean	Extremes Max. Day	Extremes Min. Day	CHLORIDES (Cl) Milligrams/Liter Wt. Mean	Extremes Max. Day	Extremes Min. Day	Tons/Day Wt. Mean	Extremes Max. Day	Extremes Min. Day	SULFATES (SO_4) Milligrams/Liter Wt. Mean	Extremes Max. Day	Extremes Min. Day	Tons/Day Wt. Mean	Extremes Max. Day	Extremes Min. Day	DISSOLVED SOLIDS (103° C) Milligrams/Liter Wt. Mean	Extremes Max. Day	Extremes Min. Day	Tons/Day Wt. Mean	Extremes Max. Day	Extremes Min. Day
1960	July	31.0	209	2690	27	368	1160	199	46	163	25	26	166	5	30	34	29	17	193	2	220	690	119	134	798	26
	Aug.	23.9	50	276	23	603	1010	371	75	125	46	11	34	6	31	34	30	5	22	2	360	600	221	54	166	29
	Sept	30.0	50	325	13	532	830	376	66	103	47	9	55	3	31	33	30	4	27	1	318	496	224	43	263	15
SUMMARY		85.0	103	2690	13	430	1160	199	56	163	25	16	166	3	30	34	29	9	193	1	257	690	119	76	798	15
1960	Oct.	31.0	358	2170	31	333	590	270	61	74	33	60	229	4	30	32	30	29	175	3	300	358	161	193	1100	20
	Nov.	30.0	65	268	38	602	872	362	76	108	45	13	30	11	32	33	30	6	20	3	359	521	216	62	145	52
	Dec.	31.0	561	3630	36	337	846	200	42	105	25	61	232	10	30	33	29	44	269	3	201	505	119	293	1100	48
1961	Jan.	31.0	261	2480	77	348	950	420	68	118	32	68	390	23	31	34	31	22	208	7	327	567	251	230	1880	112
	Feb.	28.0	245	1100	69	502	871	287	62	108	36	41	112	20	31	33	30	20	89	6	300	520	172	198	539	96
	Mar.	31.0	457	4310	88	409	800	250	51	99	31	63	361	19	31	33	30	38	349	8	244	478	149	301	1730	92
	Apr.	30.0	464	3930	88	470	740	300	58	91	37	73	395	22	31	33	30	39	320	8	281	442	179	353	1910	105
	May	31.0	300	1430	65	627	796	210	53	99	26	63	233	11	31	33	29	25	134	4	255	475	125	206	1120	49
SUMMARY		243.0	337	4310	31	422	950	200	52	118	25	47	395	4	31	34	29	28	349	3	252	567	119	230	1910	20

MONTHLY SUMMARY OF CONTINUOUS RECORDED FLOW AND QUALITY DATA

River Basin: Red

Station Numbers: PHS: 522 USGS: 3320.00

Stream and Location: Red River near Colbert, Oklahoma (Denison Dam) Lat. 33°49'05", long. 96°34'20", NE¼, Sec. 33, T.8 S., R.7 E., at dam 4 miles NW of Denison, Bryan County, Oklahoma, and at river mile 729.5. (USGS Gaging Station located approximately 3 miles downstream from Denison Dam.)

Main Stream Flow: 5200 cfs Range: 344-13450 cfs Years: 39

Equations Used to Compute Concentrations From Specific Conductance

	Number Samples	Equations	Std. Error	Correl. Coeff.
Dissolved Solids:	27	TDS = 0.6187 Sp. C.	54	0.9347
Chlorides:	118	Cl = 0.2020 Sp. C.	23	0.9077
Sulfates:	118	SO_4 = 0.1387 Sp. C.	24	0.7924

Remarks: Records very good. Occasional minor stratification. Instantaneous conductivity range 1610-2580 micromhos. The flow recurrence intervals for water years 1961-1962 are 1.90 and 2.11 respectively.

Year	Month	Number of Days of Specific Conductance Record	STREAM FLOW Cubic Feet/Second			SPECIFIC CONDUCTANCE Micromhos/Centimeter @ 25° C			CHLORIDES (Cl) Milligrams/Liter						SULFATES (SO_4) Milligrams/Liter						DISSOLVED SOLIDS (103° C) Milligrams/Liter					
				Extremes			Extremes			Extremes			Tons/Day				Extremes			Tons/Day				Extremes			Tons/Day	
			Mean	Max. Day	Min. Day	Wt. Mean	Max. Day	Min. Day	Wt. Mean	Max. Day	Min. Day	Wt. Mean	Max. Day	Min. Day	Wt. Mean	Max. Day	Min. Day	Wt. Mean	Max. Day	Min. Day	Wt. Mean	Max. Day	Min. Day	Wt. Mean	Max. Day	Min. Day
1960	July	31.0	3790	5980	1010	1760	1890	1640	155	382	332	3630	5630	905	244	263	228	2500	3870	623	1090	1170	1020	11100	17200	2770
	Aug.	31.0	2210	4670	295	1910	2000	1850	386	404	374	2300	4810	297	266	278	257	1580	3310	205	1180	1240	1150	7030	14700	911
	Sept	30.0	1920	3770	214	2020	2080	1920	409	419	388	2120	4140	239	281	289	267	1460	2850	164	1250	1290	1190	6490	12700	732
	SUMMARY	92.0	2640	5980	214	1860	2080	1640	376	419	332	2690	5630	239	259	289	228	1850	3870	164	1150	1290	1020	8230	17200	732
1960	Oct.	31.0	11500	30480	170	2020	2110	1890	408	425	382	12620	33200	176	280	293	263	8660	22860	121	1250	1300	1170	38620	101780	539
	Nov.	30.0	3220	9350	464	1970	2310	1890	398	466	383	3450	10180	529	273	320	263	2370	7000	364	1220	1430	1170	10570	31190	1620
	Dec.	31.0	4760	10130	446	2020	2080	1990	409	420	401	5240	11020	486	281	289	276	3600	7590	334	1250	1290	1230	16050	33780	1490
1961	Jan.	31.0	4910	6650	3660	2090	2410	1970	422	487	398	5590	7180	4050	290	335	274	3840	4940	2790	1290	1490	1220	17140	22000	12400
	Feb.	28.0	2290	4150	670	2240	2460	1920	452	497	388	2800	4620	731	310	342	267	1920	3160	503	1390	1520	1190	8560	14180	2240
	Mar.	31.0	2790	7520	156	2060	2170	2010	415	439	406	3120	8230	177	285	302	279	2150	5660	122	1270	1340	1240	9570	25200	542
	Apr.	30.0	5760	10690	196	2100	2210	2010	425	446	406	6600	12210	234	292	307	279	4540	8400	161	1300	1370	1240	20230	37430	716
	May	31.0	2130	3650	394	2180	2200	2120	440	444	428	2530	4330	471	302	306	294	1740	2980	324	1350	1360	1310	7750	13280	1450
	June	30.0	2610	4500	448	2160	2200	2110	437	444	426	3080	5280	524	300	306	293	2110	3640	360	1340	1360	1310	9430	16190	1610
	July	31.0	3050	5410	545	2170	2200	2130	439	444	430	3600	6420	653	302	306	296	2480	4420	449	1350	1360	1320	11040	19670	2000
	Aug.	31.0	2370	3830	591	2190	2200	2160	442	444	436	2820	4500	697	304	306	300	1940	3100	480	1350	1360	1340	8650	13790	2140
	Sept	30.0	3150	8860	301	2180	2220	2100	440	448	424	3730	10410	361	302	308	292	2560	7160	248	1350	1370	1300	11440	31900	1110
	SUMMARY	365.0	4040	30480	156	2090	2460	1890	422	497	382	4620	33200	176	290	342	263	3180	22860	121	1290	1520	1170	14140	101780	539
1961	Oct.	31.0	4670	9860	379	2200	2210	2190	444	446	442	5590	11810	452	305	307	304	3840	8130	311	1360	1370	1350	17120	36190	1380
	Nov.	30.0	4590	10470	559	2190	2220	2170	442	449	439	5470	12380	669	303	309	301	3750	8520	460	1350	1380	1340	16760	37950	2050
	Dec.	31.0	4260	9910	680	2130	2170	2100	431	438	423	4950	11700	775	296	302	291	3400	8050	534	1320	1340	1300	15160	35850	2380
1962	Jan.	31.0	2960	4500	694	2000	2100	1900	403	424	384	3220	4940	785	277	292	264	2210	3400	540	1240	1300	1180	9860	15130	2410
	Feb.	28.0	1760	3740	378	1970	2000	1920	398	404	388	1890	4020	394	273	278	267	1290	2760	271	1220	1240	1190	5780	12310	1210
	Mar.	31.0	1250	2750	166	1910	1970	1820	386	398	368	1300	2860	178	265	274	254	892	1970	123	1180	1220	1130	3980	8780	546
	Apr.	30.0	2020	3590	401	1920	1990	1800	389	401	364	2120	3820	424	267	276	251	1460	2630	292	1190	1230	1120	6490	11690	1300
	May	31.0	1270	3630	38	1980	2000	1920	400	404	388	1370	3950	41	274	278	267	935	2720	28	1220	1240	1190	4180	12090	125
	June	30.0	17660	39990	235	1960	2020	1910	395	408	386	18800	42130	246	271	280	266	12900	28990	170	1210	1250	1180	57590	129100	755
	July	31.0	4170	6540	839	1950	2000	1890	394	404	381	4430	6970	905	270	278	262	3040	4800	623	1210	1240	1170	13560	21370	2770
	Aug.	31.0	3990	5510	756	1910	2000	1870	386	403	378	4150	5710	811	265	277	260	2850	3930	558	1180	1240	1160	12730	17510	2480
	Sept	30.0	3470	5950	473	1870	1990	1720	377	401	348	3520	6030	500	259	276	240	2420	4150	344	1150	1230	1070	10790	18470	1530
	SUMMARY	365.0	4340	39990	38	2010	2220	1720	405	449	348	4730	42130	41	278	309	240	3250	28990	28	1240	1380	1070	14480	129100	125

MONTHLY SUMMARY OF CONTINUOUS RECORDED FLOW AND QUALITY DATA

River Basin: Red Station Numbers: PHS: 520 USGS: 3310.00

Stream and Location: Washita River near Durwood, Oklahoma
Lat. 34°14', long. 96°58', SE¼, Sec. 3, T.4 S., R.3 E., on bridge of State Hwy 18, 4 mi. north of Durwood, Carter County, Oklahoma, and at river mile 63.4 above mouth.

Main Stream Flow: 1527 cfs Range: 391-3890 cfs Years: 34

Equations Used to Compute Concentrations From Specific Conductance

	Number Samples		Equations	Std. Error	Correl. Coeff.
Dissolved Solids:	26	TDS = 0.7381	Sp. C.	71.	0.9548
Chlorides:	193	Cl = 0.0624	Sp. C.	14.	0.8785
Sulfates:	193	Log SO_4 = 1.3372	Log Sp. C.-1.6246	0.0729	0.9599

Remarks: Records good. Occasional minor stratification. Instantaneous conductivity range 110-1810 micromhos. The flow recurrence intervals for water years 1961-1962 are 1.66 and 1.94 respectively.

Year	Month	Number of Days of Specific Conductance Record	STREAM FLOW Cubic Feet/Second Mean	Extremes Max. Day	Extremes Min. Day	SPECIFIC CONDUCTANCE Micromhos/Centimeter @ 25° C Wt. Mean	Extremes Max. Day	Extremes Min. Day	CHLORIDES (Cl) Milligrams/Liter Wt. Mean	Extremes Max. Day	Extremes Min. Day	CHLORIDES (Cl) Tons/Day Wt. Mean	Extremes Max. Day	Extremes Min. Day	SULFATES (SO_4) Milligrams/Liter Wt. Mean	Extremes Max. Day	Extremes Min. Day	SULFATES (SO_4) Tons/Day Wt. Mean	Extremes Max. Day	Extremes Min. Day	DISSOLVED SOLIDS (103° C) Milligrams/Liter Wt. Mean	Extremes Max. Day	Extremes Min. Day	DISSOLVED SOLIDS (103° C) Tons/Day Wt. Mean	Extremes Max. Day	Extremes Min. Day
1960	July	31.0	672	2470	317	898	1450	534	56	90	33	101	221	62	207	398	104	374	694	250	663	1070	394	1200	2630	734
	Aug.	31.0	550	2750	222	647	1100	350	40	68	22	59	186	27	135	273	59	199	534	90	477	808	258	706	2210	317
	Sept	30.0	352	2210	121	730	1490	365	45	93	23	43	135	23	156	410	63	148	373	92	539	1100	270	512	1600	275
SUMMARY		92.0	525	2750	121	767	1490	350	48	93	22	68	221	23	170	410	59	243	694	92	566	1100	258	809	2630	275
1960	Oct.	31.0	1800	7860	195	529	1180	350	33	74	22	160	459	36	104	303	59	504	1250	141	390	871	258	1890	5460	430
	Nov.	30.0	671	1820	465	1010	1400	529	63	87	33	114	161	101	248	378	103	449	510	423	748	1030	390	1350	1910	1210
	Dec.	31.0	1730	8770	451	687	1400	309	43	87	19	201	577	103	148	378	50	692	1660	450	507	1030	228	2370	6870	1230
1961	Jan.	31.0	685	2180	431	1230	1570	819	77	98	51	142	311	113	322	445	184	595	1150	510	908	1160	605	1680	3700	1330
	Feb.	28.0	606	745	454	1380	1500	1190	86	94	74	141	183	112	374	419	306	611	817	481	1020	1110	878	1660	2180	1340
	Mar.	31.0	1340	13660	359	771	1330	348	48	84	22	174	810	81	172	360	59	622	2170	343	569	996	257	2060	9450	956
	Apr.	30.0	1070	5170	440	892	1270	439	56	79	27	162	378	93	210	335	80	608	1130	396	658	937	324	1900	4500	1110
	May	31.0	875	3150	348	887	1410	473	55	88	30	130	240	62	208	380	90	491	1410	227	655	1040	349	1550	4700	733
	June	30.0	1540	4640	290	688	1130	480	43	71	30	179	475	49	148	287	91	616	1800	193	508	834	354	2110	5650	580
	July	31.0	1150	6890	301	531	969	425	33	60	27	103	501	36	105	232	77	326	1450	117	392	715	314	1220	5830	428
	Aug.	31.0	412	1330	204	800	1120	480	50	70	30	56	180	34	181	283	91	201	653	131	590	827	354	655	2120	399
	Sept	30.0	1660	6630	231	518	890	343	32	56	21	143	448	35	101	208	58	451	1420	130	382	657	253	1710	5270	408
SUMMARY		365.0	1130	13660	195	743	1570	309	46	98	19	140	810	34	164	445	50	500	2170	117	548	1160	228	1670	9450	399
1961	Oct.	31.0	1400	7360	545	657	1190	339	41	74	21	155	428	84	139	306	57	525	1660	312	485	878	250	1830	5100	998
	Nov.	30.0	2170	7430	547	782	1240	500	49	77	31	287	723	111	176	324	96	1030	2360	468	577	915	369	3380	8540	1320
	Dec.	31.0	1140	2910	713	1110	1430	578	69	89	36	212	333	162	280	389	116	861	1260	700	818	1060	427	2520	3960	1920
1962	Jan.	31.0	686	1020	368	1440	1520	1230	90	95	77	166	251	77	396	426	320	732	1120	324	1060	1120	908	1960	2990	916
	Feb.	28.0	518	650	453	1520	1570	1490	95	98	93	133	164	112	428	445	415	597	745	505	1120	1160	1100	1570	1960	1340
	Mar.	31.0	568	1650	409	1320	1600	803	82	100	50	126	228	106	353	453	182	541	838	453	974	1180	593	1490	2710	1260
	Apr.	30.0	783	2690	449	1130	1470	796	71	92	50	150	377	96	287	402	178	605	1380	412	835	1090	588	1760	4450	1140
	May	31.0	863	4500	265	1030	1460	665	64	91	41	149	527	62	254	398	140	591	1950	270	760	1080	491	1770	6280	742
	June	30.0	6090	17550	1400	491	933	351	31	58	22	509	1280	197	94	219	60	1540	3830	520	362	689	259	5940	15320	2320
	July	31.0	703	1530	382	1070	1300	697	67	81	43	127	271	75	267	345	149	506	1080	305	789	960	514	1500	3220	894
	Aug.	31.0	357	901	130	969	1340	688	60	84	43	58	128	29	234	357	147	225	476	125	715	989	508	688	1520	344
	Sept	30.0	977	6390	218	700	1350	445	44	84	28	116	515	38	151	360	82	398	1580	146	517	996	328	1360	6130	457
SUMMARY		365.0	1360	17550	130	799	1600	339	50	100	21	182	1280	29	181	453	57	658	3830	125	590	1180	250	2150	15320	344

MONTHLY SUMMARY OF CONTINUOUS RECORDED FLOW AND QUALITY DATA

River Basin: Red Station Numbers: PHS: 508 USGS: 3160.00

Stream and Location: Red River near Gainesville, Texas
Lat. 33°43'18", long. 97°08'40", SW¼, Sec. 36, T.9 S., R.1 E., on bridge of Hwy 77, 7 mi. north of Gainesville, Cooke County, Texas, and at river mile 791.5.

Main Stream Flow: 3170 cfs Range: 651-8360 cfs Years: 26

Equations Used to Compute Concentrations From Specific Conductance

	Number Samples	Equations	Std. Error	Correl. Coeff.
Dissolved Solids:	27	TDS = 0.6600 Sp. C.	169.	0.9823
Chlorides:	134	Log Cl = 1.1797 Log Sp. C.-1.2623	0.0380	0.9887
Sulfates:	134	SO_4 = 0.1263 Sp. C.	82.	0.9198

Remarks: Records very good. Stratification exists at high flows; however, the recorded conductivity is representative of the stream average. Instantaneous conductivity range 500-8400 micromhos. The flow recurrence intervals for water years 1961-1962 are 2.48 and 1.93 respectively.

Year	Month	Number of Days of Specific Conductance Record	STREAM FLOW Cubic Feet/Second Mean	Extremes Max. Day	Extremes Min. Day	SPECIFIC CONDUCTANCE Micromhos/Centimeter @ 25° C Wt. Mean	Extremes Max. Day	Extremes Min. Day	CHLORIDES (Cl) Milligrams/Liter Wt. Mean	Extremes Max. Day	Extremes Min. Day	CHLORIDES (Cl) Tons/Day Wt. Mean	Extremes Max. Day	Extremes Min. Day	SULFATES (SO_4) Milligrams/Liter Wt. Mean	Extremes Max. Day	Extremes Min. Day	SULFATES (SO_4) Tons/Day Wt. Mean	Extremes Max. Day	Extremes Min. Day	DISSOLVED SOLIDS (103° C) Milligrams/Liter Wt. Mean	Extremes Max. Day	Extremes Min. Day	DISSOLVED SOLIDS (103° C) Tons/Day Wt. Mean	Extremes Max. Day	Extremes Min. Day
1960	July	3.4	3150	10800	509	4020	4840	3040	983	1220	705	7330	11900	3840	506	610	384	3780	5960	2090	2650	3190	7010	19800	31200	10900
	Aug.	18.9	645	1628	302	3930	5250	2620	962	1340	592	1920	3870	654	495	662	331	988	1910	364	2590	3470	1730	5180	9990	1910
	Sept	24.2	610	2170	265	4420	5750	2500	1110	1490	559	1910	3530	634	557	724	315	961	1860	334	2920	3790	1650	5030	9760	1750
SUMMARY		47.0	1470	10800	265	4210	5750	2500	1040	1490	559	2310	11900	634	530	724	315	1180	5960	334	2780	3790	1650	6170	31200	1750
1960	Oct.	31.0	10600	60260	330	1790	4500	1490	376	1120	304	10740	56950	844	226	567	188	6450	34330	441	1180	2970	986	33720	178980	2310
	Nov.	30.0	1790	4780	946	4380	5750	2800	1080	1490	638	5220	8300	3630	552	725	352	2670	4250	1820	2890	3800	1850	13970	22210	9510
	Dec.	31.0	2920	12160	885	3130	6500	1310	730	1730	261	5760	11830	2970	394	819	165	3110	7160	1660	2060	4290	866	16260	37450	8740
1961	Jan.	31.0	1460	2910	779	4760	6550	3170	1190	1740	738	4690	8770	2980	600	825	399	2370	4450	1470	3140	4320	2090	12350	23260	7670
	Feb.	28.0	1230	1910	792	5510	6240	5020	1420	1650	1272	4700	7390	3100	695	787	633	2310	3640	1510	3640	4120	3310	12060	19040	7910
	Mar.	31.0	2930	9200	599	3400	6520	2200	801	1730	481	6330	21050	1150	429	821	277	3400	10780	667	2250	4300	1450	17730	56320	3480
	Apr.	30.0	3240	14110	617	2900	4600	1680	667	1150	350	5820	16250	1910	367	580	212	3210	9390	970	1920	3040	1110	16720	49050	5070
	May	31.0	1720	4030	604	3090	5130	2000	717	1310	436	3330	5860	1930	390	646	252	1820	3250	990	2040	3390	1320	9480	17000	5200
	June	30.0	5610	19250	659	1980	4300	1300	424	1060	257	6410	34710	1770	250	542	163	3780	18470	959	1310	2840	855	19760	96520	5010
	July	31.0	2580	7410	547	4070	8310	1540	989	2310	315	6890	22370	1570	514	1050	195	3580	10900	812	2680	5490	1020	18700	56910	4250
	Aug.	31.0	667	1390	438	3760	4640	2150	904	1160	467	1620	3160	1110	474	585	271	852	1670	640	2480	3060	1420	4460	8710	3360
	Sept	30.0	1610	9250	341	1710	4590	688	356	1150	122	1540	6490	428	215	579	87	935	4120	256	1130	3030	454	4890	21500	1350
SUMMARY		365.0	3030	60260	330	2770	8310	688	630	2310	122	5170	56950	428	350	1050	87	2870	34330	256	1830	5490	454	15010	178980	1350
1961	Oct.	31.0	739	1750	280	2340	3920	1180	516	950	231	1030	3410	494	295	494	148	588	1810	278	1550	2590	776	3080	9470	1470
	Nov.	30.0	2430	6700	281	2110	3930	1330	455	953	266	2980	10940	655	265	495	168	1740	6130	345	1390	2600	878	9110	32090	1810
	Dec.	31.0	1250	3940	601	3130	4820	1590	727	1210	328	2440	4780	1720	395	607	201	1330	2820	886	2070	3180	1050	6950	14700	4630
1962	Jan.	31.0	510	663	342	4440	5220	1320	1100	1330	264	1510	2050	269	559	657	167	768	1010	169	2930	3440	872	4020	5300	890
	Feb.	28.0	662	1080	554	4230	5440	3410	1040	1400	805	1870	3900	1270	533	686	430	953	1940	681	2790	3590	2250	4980	10140	3360
	Mar.	31.0	436	624	285	4150	5250	3410	1010	1340	805	1190	2020	765	523	661	429	615	1020	400	2740	3460	2250	3220	5320	2090
	Apr.	30.0	973	7990	281	2910	6860	1490	667	1840	305	1750	10250	937	367	864	188	965	5930	472	1920	4530	984	5040	31020	2470
	May	31.0	1810	8570	281	3170	4990	1410	737	1260	285	3590	15160	927	399	628	178	1950	8360	466	2090	3290	932	10200	43640	2430
	June	30.0	14790	47560	2420	1480	3660	893	301	877	166	12000	30940	1100	187	462	113	7450	18490	1630	980	2420	589	39020	96570	8500
	July	31.0	2360	10320	635	2730	4660	1270	618	1170	251	3940	17740	1280	344	587	160	2190	9010	690	1800	3080	836	11450	47030	3610
	Aug.	31.0	1670	5120	348	3200	4860	2410	746	1230	536	3360	17010	869	403	612	304	1820	8490	458	2110	3210	1590	9500	44340	2400
	Sept	30.0	3620	6720	559	1460	3440	872	297	818	161	2900	6040	1080	185	433	110	1800	3600	616	956	2270	576	9420	18770	3230
SUMMARY		365.0	2600	47560	280	2100	6860	872	454	1840	161	3170	30940	269	265	864	110	1850	18490	169	1390	4530	576	9680	96570	890

MONTHLY SUMMARY OF CONTINUOUS RECORDED FLOW AND QUALITY DATA

River Basin: Red Station Numbers: FWS: 507 USGS: 3155.00

Stream and Location: Red River near Terral, Oklahoma
Lat. 33°52'50", long. 97°56'15", on bridge of U. S. Hwy 81, 1.2 mi. south Terral, Jefferson County, Okla., and at river mi. 872.

Main Stream Flow: 2570 cfs Range: 911-7120 cfs Years: 24

Equations Used to Compute Concentrations From Specific Conductance

	Number Samples	Equations		Std. Error	Correl. Coeff.
Dissolved Solids:	27	TDS	= 0.6586 Sp. C.	161.	0.9851
Chlorides:	140	Log Cl	= 1.1711 Log Sp. C.-1.2434	0.0272	0.9943
Sulfates:	140	SO_4	= 0.1277 Sp. C.	82.	0.9223

Remarks: Records poor. Stratification varies with certain flow conditions. Two channels of different water quality exist. Recorded conductivity is not always representative of the stream average. Instantaneous conductivity range 400-9500 micromhos. The flow recurrence intervals for water years 1961-1962 are 2.82 and 1.92 respectively.

Year	Month	Number of Days of Specific Conductance Record	STREAM FLOW, Cubic Feet/Second			SPECIFIC CONDUCTANCE, Micromhos/Centimeter @ 25° C			CHLORIDES (Cl), Milligrams/Liter						SULFATES (SO_4), Milligrams/Liter						DISSOLVED SOLIDS (103° C), Milligrams/Liter					
				Extremes			Extremes			Extremes			Tons/Day	Extremes			Tons/Day	Extremes			Tons/Day	Extremes			Tons/Day	Extremes	
			Mean	Max. Day	Min. Day	Wt. Mean	Max. Day	Min. Day	Wt. Mean	Max. Day	Min. Day	Wt. Mean	Max. Day	Min. Day	Wt. Mean	Max. Day	Min. Day	Wt. Mean	Max. Day	Min. Day	Wt. Mean	Max. Day	Min. Day	Wt. Mean	Max. Day	Min. Day
1960	July	21.8	2810	8570	408	2870	6300	954	654	1600	176	3310	7130	1430	367	806	122	1860	4070	781	1890	4150	629	9580	21000	4020
	Aug.	17.0	631	1130	304	4340	6040	2690	1040	1530	540	2110	3950	1230	555	775	318	1130	2020	677	2860	3990	1640	5800	10400	3490
	Sept	19.4	588	1590	211	3940	5000	2950	930	1230	660	1380	2960	605	504	640	378	747	1690	323	2600	3300	1940	3850	8710	1660
SUMMARY		58.0	1340	8570	211	3290	6300	954	765	1600	176	2320	7130	605	421	806	122	1280	4070	323	2170	4150	629	6570	21000	1660
1960	Oct.	31.0	10100	63710	212	2200	5000	1420	469	1230	280	12770	61690	702	281	639	181	7650	38730	366	1450	3290	935	39430	199400	1890
	Nov.	30.0	1500	2730	811	4990	6550	3400	1220	1680	779	4950	6410	3400	637	837	434	2580	3450	1710	3290	4310	2240	13290	17800	8830
	Dec.	31.0	2340	10780	764	3970	6400	2140	935	1640	454	5900	18360	2590	507	817	273	3200	10550	1350	2610	4220	1410	16470	54330	6950
1961	Jan.	31.0	1210	2480	616	5530	7000	3850	1380	1820	903	4510	6220	2790	706	894	492	2310	3380	1390	3640	4610	2540	11900	17420	7170
	Feb.	28.0	1290	1880	637	6400	7100	5600	1640	1850	1400	5700	7850	2914	818	907	715	2850	3946	1450	4220	4680	3690	14690	20340	7472
	Mar.	31.0	2810	9410	545	3580	7200	2470	829	1880	538	6290	15730	2280	457	919	316	3470	9000	1150	2360	4740	1630	17870	46370	5910
	Apr.	30.0	2210	11720	563	3110	4900	1800	702	1200	371	4190	11710	1790	397	625	230	2370	7280	939	2050	3230	1190	12210	37510	4830
	May	31.0	1210	2560	639	3180	5700	1620	720	1430	328	2350	4120	1231	406	728	207	1320	2310	708	2090	3750	1070	6820	11900	3650
	June	30.0	5040	16440	451	1800	4300	945	369	1030	174	5010	17440	1130	229	549	121	3110	10780	613	1180	2830	622	16060	55510	3160
	July	31.0	2250	7280	517	4080	8500	1900	965	2280	395	5860	20970	1740	521	1090	243	3160	10740	908	2690	5600	1250	16300	54750	4690
	Aug.	31.0	527	1240	309	3870	4700	2000	907	1140	419	1290	2190	859	494	600	255	701	1120	460	2550	3100	1320	3620	5770	2370
	Sept	30.0	1500	8880	299	1590	4560	542	320	1100	91	1290	3400	567	203	582	69	821	2310	345	1050	3000	357	4230	11910	1780
SUMMARY		365.0	2670	63710	212	3030	8500	542	682	2280	91	4930	61690	567	387	1090	69	2800	38730	345	2000	5600	357	14410	199400	1780
1961	Oct.	31.0	505	1640	238	2550	4580	1600	556	1110	323	756	1740	596	324	585	204	442	1070	334	1680	3020	1050	2280	5530	1720
	Nov.	30.0	1820	7030	277	2690	4770	1600	594	1160	323	2920	7670	787	344	609	204	1690	4730	420	1770	3140	1050	8720	24360	2170
	Dec.	31.0	689	1120	469	4360	5380	2900	1040	1340	647	1940	2830	1500	556	687	370	1030	1540	787	2870	3540	1910	5330	7900	4050
1962	Jan.	31.0	470	948	244	5030	6010	3900	1230	1520	915	1560	3580	663	642	767	498	813	1830	361	3310	3960	2570	4200	9440	1860
	Feb.	28.0	590	908	494	4110	4860	3670	975	1190	852	1550	2790	1180	526	621	468	836	1470	647	2710	3200	2410	4310	7580	3330
	Mar.	31.0	380	574	292	4690	5910	3330	1130	1490	760	1160	1670	842	599	754	425	613	888	451	3090	3890	2190	3160	4570	2320
	Apr.	30.0	1170	10800	251	3480	7670	1880	801	2020	389	2520	20580	913	444	979	240	1394	11300	474	2290	5050	1240	7190	58190	2440
	May	31.0	1520	5270	300	2780	6160	875	615	1570	159	2510	14140	1010	354	787	112	1450	7530	565	1830	4060	576	7470	38780	2910
	June	30.0	12770	45200	1960	1680	3840	890	342	899	162	11770	47960	3540	215	490	114	7400	26320	2160	1110	2530	586	38110	135500	11100
	July	31.0	1720	8270	494	3180	5320	1600	723	1320	324	3360	16750	1280	407	679	205	1890	9020	723	2100	3500	1060	9750	46530	3720
	Aug.	31.0	1200	5340	286	3670	4780	2740	854	1160	605	2750	15260	894	469	610	350	1510	8150	471	2420	3140	1800	7790	41930	2420
	Sept	30.0	3130	8020	313	2060	4490	1280	435	1080	248	3670	10370	899	264	573	163	2230	6210	484	1360	2950	841	11470	31990	2490
SUMMARY		365.0	2160	45200	238	2400	7670	875	518	2020	159	3000	47960	596	306	979	112	1770	26320	334	1580	5050	576	9130	135500	1720

MONTHLY SUMMARY OF CONTINUOUS RECORDED FLOW AND QUALITY DATA

River Basin: Red

Station Numbers: PHS: 704 USGS: 3150.00

Stream and Location: Little Wichita River near Henrietta, Texas
Lat. 33°55'00", long. 98°12'30", at bridge on State Hwy 148, 1.5 mi. NW of Henrietta, Clay County, Texas

Main Stream Flow: 134 cfs Range: 31-427 cfs Years: 9

Equations Used to Compute Concentrations From Specific Conductance

	Number Samples	Equations	Std. Error	Correl. Coeff.
Dissolved Solids:	39	TDS = 0.6085 Sp. C.	41.	0.9975
Chlorides:	151	Log Cl = 1.3066 Log Sp. C.-1.5484	0.0572	0.9901
Sulfates:	151	SO_4 = 0.0009 Sp. C. + 19	7.	0.115

Remarks: Records fair. Occasional minor stratification. Instantaneous conductivity range 90-8100 micromhos. The flow recurrence intervals for water years 1961 and 1962 are 1.20 and 2.0 respectively. The reason for the low correlation coefficient on sulfates is that the sulfate concentrations were below the lower limits of the laboratory analysis procedure.

Year	Month	Number of Days of Specific Conductance Record	STREAM FLOW Cubic Feet/Second Mean	Extremes Max. Day	Extremes Min. Day	SPECIFIC CONDUCTANCE Micromhos/Centimeter @ 25° C Wt. Mean	Extremes Max. Day	Extremes Min. Day	CHLORIDES (Cl) Milligrams/Liter Wt. Mean	Extremes Max. Day	Extremes Min. Day	CHLORIDES (Cl) Tons/Day Wt. Mean	Extremes Max. Day	Extremes Min. Day	SULFATES (SO_4) Milligrams/Liter Wt. Mean	Extremes Max. Day	Extremes Min. Day	SULFATES (SO_4) Tons/Day Wt. Mean	Extremes Max. Day	Extremes Min. Day	DISSOLVED SOLIDS (103° C) Milligrams/Liter Wt. Mean	Extremes Max. Day	Extremes Min. Day	DISSOLVED SOLIDS (103° C) Tons/Day Wt. Mean	Extremes Max. Day	Extremes Min. Day
1960	July	31.0	10	96	0	719	1820	294	151	510	47	4	34	1	20	21	20	1	5	1	438	1110	179	12	103	1
	Aug.	31.0	0	0	0	--	--	--	--	--	--	0	0	0	--	--	--	0	0	0	--	--	--	0	0	0
	Sept	30.0	19	228	1	1190	2250	750	295	679	161	15	195	1	20	21	20	1	13	3	722	1370	457	36	472	1
	SUMMARY	92.0	14	228	0	1030	2250	294	243	679	47	6	195	1	39	21	20	1	13	1	625	1370	179	16	472	1
1960	Oct.	31.0	183	962	0	327	720	--	55	153	--	27	206	0	19	20	--	9	50	0	199	439	--	98	644	0
	Nov.	30.0	3	26	0	610	700	--	123	148	--	1	10	0	20	20	--	0	1	0	371	426	--	3	30	0
	Dec.	31.0	88	767	0	365	518	--	63	98	--	15	126	0	19	19	--	4	40	0	222	315	--	53	453	0
1961	Jan.	31.0	13	95	611	495	752	289	96	161	46	3	22	1	19	20	19	6	5	0	301	458	176	10	65	0
	Feb.	28.0	29	150	0	673	1110	--	146	268	--	11	101	0	20	20	--	2	8	0	410	674	--	32	257	0
	Mar.	31.0	38	355	0	839	1330	--	187	340	--	19	327	0	20	20	--	2	20	0	511	810	--	53	775	0
	Apr.	30.0	15	198	0	643	1000	--	132	234	--	5	52	0	20	20	--	1	11	0	391	609	--	16	144	0
	May	31.0	7	53	0	439	4300	--	80	1580	--	1	7	0	19	23	--	0	3	0	267	2620	--	5	27	0
	June	30.0	126	1300	0	496	6760	--	94	2860	--	32	214	0	19	25	--	6	68	0	302	4110	--	102	594	0
	July	31.0	15	126	0.1	1560	2250	594	422	678	118	17	196	1	20	21	20	1	7	0	952	1370	362	38	411	0
	Aug.	31.0	3	50	0	350	402	--	60	70	--	0	9	0	19	19	--	0	3	0	213	245	--	2	29	0
	Sept	30.0	96	789	0	500	1000	--	95	235	--	25	228	0	19	20	--	5	42	0	304	611	--	78	599	0
	SUMMARY	365.0	51	1300	0	483	6760	--	91	2860	--	13	327	0	19	25	--	3	68	0	294	4110	--	41	775	0
1961	Oct.	31.0	14	144	0	419	740	--	76	158	--	3	41	0	19	20	--	1	8	0	255	450	--	10	117	0
	Nov.	30.0	109	828	0	363	4060	--	111	1500	--	32	215	0	20	23	--	6	44	0	343	2470	--	100	526	0
	Dec.	31.0	19	159	0	451	1980	--	83	570	--	4	26	0	19	21	--	1	8	0	274	1200	--	14	66	0
1962	Jan.	31.0	0	0	0	--	--	--	--	--	--	0	0	0	--	--	--	0	0	0	--	--	--	0	0	0
	Feb.	28.0	0	0	0	--	--	--	--	--	--	0	0	0	--	--	--	0	0	0	--	--	--	0	0	0
	Mar.	31.0	0.1	2	0	2170	2210	--	647	660	--	0	4	0	21	21	--	0	0	0	1320	1350	--	1	8	0
	Apr.	30.0	42	287	0	676	2360	--	141	720	--	16	135	0	20	21	--	2	15	0	411	1440	--	46	284	0
	May	31.0	69	771	0	732	1250	--	156	315	--	29	272	0	20	20	--	4	41	0	445	761	--	82	784	0
	June	30.0	453	1880	0.4	380	859	175	66	191	24	81	284	0	19	20	19	23	99	0	231	523	106	282	1030	1
	July	31.0	78	997	0	577	1200	--	115	298	--	24	223	0	20	20	--	4	53	0	351	730	--	73	744	0
	Aug.	31.0	2	19	0	567	728	--	112	154	--	1	5	0	20	20	--	0	1	0	346	443	--	2	17	0
	Sept	30.0	484	2100	7	338	990	199	57	231	28	74	229	4	19	20	19	25	110	1	206	603	121	269	897	10
	SUMMARY	365.0	106	2100	0	426	4060	--	77	1500	--	22	284	0	19	23	--	5	110	0	259	2470	--	73	1030	0

MONTHLY SUMMARY OF CONTINUOUS RECORDED FLOW AND QUALITY DATA

River Basin: Red

Station Numbers: PHS: 700 USGS: 3135.00

Stream and Location: Beaver Creek near Waurika, Oklahoma
Lat. 34°13', Long. 98°0.3', on north line of NW¼, Sec. 16, T.4 S., R.8 W., at bridge on State Hwy 5, 4.5 mi. NW of Waurika, Jefferson County, Okla., and at river mi. 25.8 above mouth.

Main Stream Flow: 154 cfs Range: 19-223 cfs Years: 8

Remarks: Records very good. Stratification nil. Instantaneous conductivity range 130-2900 micromhos. The flow recurrence interval for water year 1961 is 1.78.

Equations Used to Compute Concentrations From Specific Conductance

	Number Samples	Equations	Std. Error	Correl. Coeff.
Dissolved Solids:	39	TDS = 0.6932 Sp. C.	73	0.9606
Chlorides:	66	Cl = 0.1077 Sp. C.	40	0.8067
Sulfates:	66	SO_4 = 0.1771 Sp. C.	51	0.8438

Year	Month	Number of Days of Specific Conductance Record	STREAM FLOW Cubic Feet/Second Mean	Extremes Max. Day	Extremes Min. Day	SPECIFIC CONDUCTANCE Micromhos/Centimeter @ 25° C Wt. Mean	Extremes Max. Day	Extremes Min. Day	CHLORIDES (Cl) Milligrams/Liter Wt. Mean	Extremes Max. Day	Extremes Min. Day	CHLORIDES (Cl) Tons/Day Wt. Mean	Extremes Max. Day	Extremes Min. Day	SULFATES (SO_4) Milligrams/Liter Wt. Mean	Extremes Max. Day	Extremes Min. Day	SULFATES (SO_4) Tons/Day Wt. Mean	Extremes Max. Day	Extremes Min. Day	DISSOLVED SOLIDS (103° C) Milligrams/Liter Wt. Mean	Extremes Max. Day	Extremes Min. Day	DISSOLVED SOLIDS (103° C) Tons/Day Wt. Mean	Extremes Max. Day	Extremes Min. Day
1960	July	31.0	146	1300	6	476	1720	301	51	185	32	20	112	2	84	305	53	33	186	4	330	1190	209	130	734	14
	Aug.	31.0	20	94	4	853	1800	418	92	194	45	5	26	1	151	319	74	8	43	2	590	1250	290	31	168	7
	Sept	30.0	6	34	0	628	1200	--	68	129	--	1	6	0	111	213	--	2	10	0	435	832	--	7	39	0
SUMMARY		92.0	130	1300	0	524	1800	--	56	194	--	9	112	0	93	319	--	14	186	0	363	1250	--	56	734	0
1960	Oct.	31.0	96	848	1	282	977	182	30	105	20	8	72	0	50	173	32	13	119	0	195	677	126	51	461	1
	Nov.	30.0	10	12	9	1050	1290	661	113	139	69	3	4	2	186	228	114	5	7	3	728	894	444	20	29	13
	Dec.	31.0	77	586	12	661	1400	368	71	151	40	15	63	4	117	248	65	14	103	7	458	970	255	95	403	28
1961	Jan.	31.0	35	119	14	1210	1480	757	130	159	82	12	38	6	213	262	136	10	63	9	835	1030	525	79	248	36
	Feb.	28.0	37	63	27	1350	1540	1210	145	166	130	14	24	10	239	273	214	24	39	17	935	1070	839	92	154	67
	Mar.	31.0	130	1560	21	716	1450	453	77	156	49	27	206	9	127	257	80	44	336	14	496	1010	314	174	1320	56
	Apr.	30.0	97	961	27	1000	1740	445	108	187	48	28	122	13	177	308	79	46	200	22	695	1210	308	181	781	86
	May	31.0	111	1100	19	733	1880	319	79	202	34	24	132	9	130	333	56	39	216	16	508	1300	221	152	845	61
SUMMARY		243.0	74	1560	1	755	1880	182	81	202	20	16	206	0	133	333	32	27	336	0	522	1300	126	105	1320	1

MONTHLY SUMMARY OF CONTINUOUS RECORDED FLOW AND QUALITY DATA

River Basin: Red

Station Numbers: PHS: 503 USGS: 3125.00

Stream and location: Wichita River at Wichita Falls, Texas
Lat. 33°54'30", Long. 98°32'05", on bridge of Beverly Drive in Wichita Falls, Wichita County, Texas, 8.4 mi. upstream from Holiday Creek.

Equations Used to Compute Concentrations From Specific Conductance

	Number Samples		Equations	Std. Error	Correl. Coeff.
Dissolved Solids:	27	TDS = 0.6530	Sp. C.	261.	0.9759
Chlorides:	128	Log Cl = 1.0961	Log Sp. C.-0.9387	0.0283	0.9913
Sulfates:	128	SO_4 = 0.0981	Sp. C.	100.	0.7940

Main Stream Flow 324 cfs Range: 83-977 cfs Years: 25

Remarks: Records fair. Stratification nil. Instantaneous conductivity range 340-12,900 micromhos. The flow recurrence intervals for water years 1961-1962 are 3.85 and 1.52 respectively.

Year	Month	Number of Days of Specific Conductance Record	STREAM FLOW Cubic Feet/Second Mean	STREAM FLOW Extremes Max. Day	STREAM FLOW Extremes Min. Day	SPECIFIC CONDUCTANCE Micromhos/Centimeter @ 25° C Wt. Mean	SPECIFIC CONDUCTANCE Extremes Max. Day	SPECIFIC CONDUCTANCE Extremes Min. Day	CHLORIDES (Cl) Milligrams/Liter Wt. Mean	CHLORIDES (Cl) Milligrams/Liter Extremes Max. Day	CHLORIDES (Cl) Milligrams/Liter Extremes Min. Day	CHLORIDES (Cl) Tons/Day Wt. Mean	CHLORIDES (Cl) Tons/Day Extremes Max. Day	CHLORIDES (Cl) Tons/Day Extremes Min. Day	SULFATES (SO_4) Milligrams/Liter Wt. Mean	SULFATES (SO_4) Milligrams/Liter Extremes Max. Day	SULFATES (SO_4) Milligrams/Liter Extremes Min. Day	SULFATES (SO_4) Tons/Day Wt. Mean	SULFATES (SO_4) Tons/Day Extremes Max. Day	SULFATES (SO_4) Tons/Day Extremes Min. Day	DISSOLVED SOLIDS (103° C) Milligrams/Liter Wt. Mean	DISSOLVED SOLIDS (103° C) Milligrams/Liter Extremes Max. Day	DISSOLVED SOLIDS (103° C) Milligrams/Liter Extremes Min. Day	DISSOLVED SOLIDS (103° C) Tons/Day Wt. Mean	DISSOLVED SOLIDS (103° C) Tons/Day Extremes Max. Day	DISSOLVED SOLIDS (103° C) Tons/Day Extremes Min. Day
1960	July	31.0	231	1530	91	2970	6400	1600	730	1130	372	453	1530	236	291	431	157	181	647	95	1940	2870	1040	1210	4310	632
	Aug.	31.0	144	288	93	3920	4610	3440	989	1130	860	385	696	259	384	432	337	149	268	100	2560	2880	2250	994	1790	665
	Sept	28.8	154	527	82	3690	4780	2380	915	1230	575	353	867	237	358	468	233	138	342	92	2390	3120	1560	919	2280	614
SUMMARY		91.0	176	1530	82	3430	6780	1600	850	1230	372	396	1530	234	335	468	157	156	667	92	2240	3120	1040	1040	4310	614
1960	Oct.	31.0	698	5800	57	1210	5300	480	275	1390	100	665	5060	103	119	520	47	288	2090	38	789	3460	313	1910	13900	256
	Nov.	30.0	331	580	94	3460	5460	3250	926	1660	814	826	1330	331	359	535	319	320	516	124	2390	3570	2120	2130	3440	825
	Dec.	31.0	254	1580	70	2720	5380	1150	670	1670	260	458	2230	175	267	567	113	182	866	68	1780	3640	752	1210	5770	453
1961	Jan.	31.0	63	217	55	5760	7200	3760	1520	1950	950	257	720	156	563	706	367	95	271	57	3750	4700	2440	636	1810	377
	Feb.	28.0	63	115	38	7070	8800	5050	1910	2430	1320	325	756	171	693	862	495	118	268	64	4620	5750	3300	789	1790	425
	Mar.	31.0	987	7100	29	1700	9100	560	601	2520	118	1070	5730	113	167	891	55	644	2370	46	1110	5940	366	2960	15800	304
	Apr.	30.0	586	2370	123	2690	5020	1100	650	1310	348	1020	1760	365	259	492	108	407	691	139	1730	3280	718	2720	4580	926
	May	31.0	394	1180	157	3010	4220	1610	749	1080	377	796	2320	667	295	613	158	313	916	171	1970	2760	1050	2090	6100	1140
	June	30.0	450	1310	126	3000	4650	1400	766	1210	322	905	2230	210	294	655	137	357	830	83	1960	3060	915	2380	5510	553
	July	31.0	677	3900	114	1820	4860	578	631	1260	122	554	1760	269	178	475	57	229	777	111	1190	3160	378	1530	5150	741
	Aug.	31.0	206	273	153	6270	6730	3760	1100	1230	955	602	761	396	618	664	369	229	291	152	2790	3090	2460	1530	1940	1020
	Sept	30.0	205	903	66	3210	6080	1420	806	1590	328	445	1610	110	315	588	139	174	621	45	2100	3920	926	1160	4140	301
SUMMARY		365.0	409	7100	27	3610	9100	480	587	2520	100	652	5730	103	237	891	47	263	2370	38	1570	5940	313	1748	15800	256
1961	Oct.	31.0	82	198	61	5130	6580	3730	1340	1760	967	295	737	197	503	645	366	110	270	73	3350	4300	2440	736	1800	486
	Nov.	30.0	99	336	45	4200	5720	3300	1080	1510	828	288	865	153	612	560	323	110	329	58	2740	3730	2150	733	2190	384
	Dec.	31.0	69	85	39	5980	6570	5530	1590	1760	1460	209	393	166	586	646	542	77	142	60	3910	4290	3610	513	963	402
1962	Jan.	31.0	51	70	40	5720	6590	5120	1510	1770	1340	206	311	176	561	646	502	77	113	63	3760	4300	3340	512	750	420
	Feb.	28.0	44	73	33	5630	6660	4900	1490	1790	1280	185	280	137	551	653	480	69	101	51	3670	4350	3200	459	674	337
	Mar.	31.0	73	120	56	5610	6650	4810	1420	1780	1250	278	477	196	530	652	471	104	173	72	3530	4340	3140	692	1160	482
	Apr.	30.0	150	721	68	6630	10600	2100	1200	2970	506	485	1800	201	454	1060	205	184	683	73	3020	6920	1370	1220	4550	486
	May	31.0	105	258	60	5000	5870	4260	1300	1560	1090	368	772	235	490	575	416	138	289	86	3260	3830	2770	920	1930	576
	June	30.0	488	1090	80	1880	5050	1010	446	1320	226	586	1650	155	184	495	99	243	650	60	1230	3300	662	2900	4330	401
	July	31.0	209	1500	68	3170	5150	1480	791	1350	344	446	1680	263	311	505	165	175	685	90	2070	3360	967	1170	4570	597
	Aug.	31.0	134	167	66	4460	5080	2300	1210	1330	611	606	569	163	457	498	245	153	211	62	3040	3320	1630	1020	1400	414
	Sept	30.0	408	2570	70	2430	5870	956	590	1560	212	746	3200	184	238	575	96	300	1230	73	1590	3830	623	2000	8220	488
SUMMARY		365.0	162	2570	33	3610	10600	956	858	2970	212	373	3200	137	334	1060	96	145	1230	51	2230	6920	623	968	8220	337

MONTHLY SUMMARY OF CONTINUOUS RECORDED FLOW AND QUALITY DATA

River Basin: Red

Station Numbers: FHS: 751 USGS: 3122.00

Stream and location: Beaver Creek of Wichita River near Electra, Texas
Lat. 33°56'20", long. 98°56'15", on bridge of State Farm Road 2326, 9 mi. south of Electra, Wichita County, Texas, and 8 mi. upstream from Wichita River.

Main Stream Flow: 252 cfs Range: 150-355 cfs Years: 2

Equations Used to Compute Concentrations From Specific Conductance

	Number Samples	Equations	Std. Error	Correl. Coeff.
Dissolved Solids:	27	TDS = 0.6060 Sp. C.	295.	0.9924
Chlorides:	186	Log Cl = 1.2167 Log Sp. C.-1.3267	0.0784	0.9867
Sulfates:	186	SO_4 = 0.0076 Sp. C. + 25	32.	0.7657

Remarks: Records poor. Stratification nil. Instantaneous conductivity range 300-29,500 micromhos. The flow recurrence intervals for water years 1961-1962 are 1.33 and 4.00 respectively.

Year	Month	Number of Days of Specific Conductance Record	STREAM FLOW Cubic Feet/Second Mean	Extremes Max. Day	Extremes Min. Day	SPECIFIC CONDUCTANCE Micromhos/Centimeter @ 25° C Wt. Mean	Extremes Max. Day	Extremes Min. Day	CHLORIDES (Cl) Milligrams/Liter Wt. Mean	Extremes Max. Day	Extremes Min. Day	CHLORIDES (Cl) Tons/Day Wt. Mean	Extremes Max. Day	Extremes Min. Day	SULFATES (SO_4) Milligrams/Liter Wt. Mean	Extremes Max. Day	Extremes Min. Day	SULFATES (SO_4) Tons/Day Wt. Mean	Extremes Max. Day	Extremes Min. Day	DISSOLVED SOLIDS (103° C) Milligrams/Liter Wt. Mean	Extremes Max. Day	Extremes Min. Day	DISSOLVED SOLIDS (103° C) Tons/Day Wt. Mean	Extremes Max. Day	Extremes Min. Day
1960	July	2.5	64	1260	0	1530	1580	1500	350	362	340	2	4	3	37	37	37	0	0	0	927	956	909	9	11	7
	Aug.	31.0	12	44	2	1940	4220	835	462	1210	167	15	40	1	40	59	31	1	4	1	1180	2560	506	37	84	4
	Sept	27.5	20	177	0	1590	2880	1040	365	758	216	20	154	1	38	48	33	2	17	1	965	1740	630	54	416	1
SUMMARY		61.0	32	1260	0	1730	4220	835	405	1210	167	17	154	1	24	50	31	1	17	1	1050	2560	506	44	416	1
1960	Oct.	31.0	441	4400	3	751	11000	300	149	3880	48	177	1330	7	31	109	27	37	320	0	455	6670	182	541	4270	16
	Nov.	30.0	3	17	1	5460	10980	2770	1660	3880	724	15	55	3	66	108	46	1	2	0	3310	6660	1680	29	99	5
	Dec.	31.0	101	738	2	1830	11000	515	438	3880	93	119	1040	6	39	109	29	11	83	1	1110	6670	312	300	2540	13
1961	Jan.	31.0	0	70	1	5200	16030	2190	1570	6110	567	23	142	9	65	147	42	1	9	0	3150	9710	1330	47	326	17
	Feb.	28.0	11	59	1	7640	14680	4500	2500	5490	1310	77	428	9	83	137	59	3	14	0	4630	8900	2730	143	786	20
	Mar.	31.0	591	10060	0.4	764	18750	360	152	7400	60	242	1630	4	31	148	28	49	759	0	463	11360	218	737	5910	10
	Apr.	30.0	43	535	2	2220	9800	989	554	3380	207	64	532	16	42	99	33	5	47	0	1340	5940	600	155	1320	27
	May	31.0	112	830	2	3830	11030	674	1080	3880	130	325	2020	3	54	109	30	16	115	0	2320	6480	408	701	4500	8
	June	30.0	96	726	3	2550	22160	448	658	9020	83	170	1220	2	44	193	29	11	64	0	1550	13430	283	399	2120	6
	July	31.0	300	3980	1	662	8960	448	127	3010	83	103	1400	2	30	93	29	24	306	0	401	5430	284	325	4310	5
	Aug.	31.0	12	27	3	4430	10140	1860	1290	3500	448	40	136	5	39	102	39	2	6	0	2690	6150	1130	83	328	12
	Sept	30.0	58	516	1	1940	5160	488	473	1540	88	74	682	2	40	64	29	6	46	0	1180	3130	295	184	1480	5
SUMMARY		365.0	148	10060	0.4	1240	22160	300	272	9080	48	110	2020	2	34	193	27	14	759	0	749	13430	182	303	5910	5
1961	Oct.	31.0	11	133	1	2310	5720	1000	583	1760	210	18	75	2	43	68	33	1	12	0	1400	3470	606	43	384	5
	Nov.	30.0	27	188	3	3890	6690	1780	1100	2120	423	81	1080	6	55	76	39	4	40	0	2360	4060	1080	173	2050	14
	Dec.	31.0	5	38	3	6100	10760	3140	1900	3750	847	27	262	8	71	107	49	1	9	1	3700	6510	1900	53	483	19
1962	Jan.	31.0	2	3	2	8620	10100	7470	1900	3470	2430	12	22	15	66	102	82	0	1	0	5230	6120	4530	32	38	26
	Feb.	28.0	1	2	1	10320	10890	10000	3600	3840	3470	12	16	10	103	108	101	0	1	0	6250	6600	6060	22	29	17
	Mar.	31.0	2	29	1	13340	23690	10100	4930	9700	3480	28	364	7	126	204	102	1	10	0	8080	14240	6120	46	602	13
	Apr.	30.0	39	416	1	3790	11780	1200	1070	4220	263	112	1150	2	54	115	34	6	47	0	2300	7140	729	242	1940	5
	May	31.0	7	46	0	7030	11720	--	2260	4200	--	44	304	0	78	114	--	2	10	0	4260	7100	--	83	567	0
	June	30.0	137	636	2	1590	6110	525	371	1900	96	137	754	2	37	71	29	14	63	0	965	3700	318	357	1470	5
	July	31.0	27	270	0.1	2320	9760	988	586	3350	207	42	390	0	43	99	33	3	31	0	1410	5920	598	101	951	1
	Aug.	31.0	14	179	3	1340	3530	620	301	976	117	11	65	3	35	52	30	1	14	0	813	2140	376	30	181	8
	Sept	30.0	153	896	1	1030	3760	400	217	1050	69	89	458	0	33	54	28	14	74	0	621	2280	242	255	1180	1
SUMMARY		365.0	36	896	0	2040	23690	--	500	9700	--	47	1150	0	40	204	--	4	74	0	1230	14240	--	117	2050	0

MONTHLY SUMMARY OF CONTINUOUS RECORDED FLOW AND QUALITY DATA

River Basin: Red

Station Numbers: PRS: 752 USGS: 3121.00

Stream and Location: Wichita River near Mabelle, Texas
Lat. 33°45'35", on bridge of U. S. Hwy 183 & 283, 6 mi. north of Mabelle, Baylor County, Texas, 0.3 mi. downstream from Lake Kemp Dam, and at river mile 126.7 above mouth.

Main Stream Flow: 142 cfs Range: 115-224 cfs Years: 3

Equations Used to Compute Concentrations From Specific Conductance

	Number Samples	Equations	Std. Error	Correl. Coeff.
Dissolved Solids:	27	TDS = 0.6355 Sp. C.	100	0.7764
Chlorides:	121	Cl = 0.2318 Sp. C.	43	0.9094
Sulfates:	97	SO_4 = 0.0863 Sp. C.+229	30	0.7597

Remarks: Records very good. Stratification nil. Instantaneous conductivity range 650-5300 micromhos. The flow recurrence intervals for water years 1961-1962 are 6.00 and 1.20 respectively.

Year	Month	Number of Days of Specific Conductance Record	STREAM FLOW Cubic Feet/Second Mean	Extremes Max. Day	Extremes Min. Day	SPECIFIC CONDUCTANCE Micromhos/Centimeter @ 25° C Wt. Mean	Extremes Max. Day	Extremes Min. Day	CHLORIDES (Cl) Milligrams/Liter Wt. Mean	Extremes Max. Day	Extremes Min. Day	CHLORIDES (Cl) Tons/Day Wt. Mean	Extremes Max. Day	Extremes Min. Day	SULFATES (SO_4) Milligrams/Liter Wt. Mean	Extremes Max. Day	Extremes Min. Day	SULFATES (SO_4) Tons/Day Wt. Mean	Extremes Max. Day	Extremes Min. Day	DISSOLVED SOLIDS (103° C) Milligrams/Liter Wt. Mean	Extremes Max. Day	Extremes Min. Day	DISSOLVED SOLIDS (103° C) Tons/Day Wt. Mean	Extremes Max. Day	Extremes Min. Day
1960	July	31.0	381	804	5	3920	4040	3950	909	942	837	737	1530	10	567	551	535	459	943	6	2490	2580	2260	2020	4200	28
	Aug.	31.0	348	729	159	3950	4160	3750	917	946	870	861	1820	374	570	567	554	534	1120	237	2520	2650	2390	2360	5000	1020
	Sept	30.0	250	577	3	3890	4040	3800	903	936	882	608	1370	7	563	550	556	379	863	4	2470	2570	2420	1670	3760	19
SUMMARY		92.0	300	729	3	3960	4160	3550	914	966	824	737	1820	7	570	563	535	459	1108	4	2500	2650	2260	2020	5000	19
1960	Oct.	31.0	90	729	3	3550	4150	2980	823	963	691	200	1700	7	535	587	486	130	1090	4	2260	2640	1890	547	4670	18
	Nov.	30.0	279	729	4	3460	3560	2990	802	827	693	603	1600	8	528	536	487	397	1060	5	2200	2270	1900	1650	4370	22
	Dec.	31.0	4	9	3	3110	3470	2230	721	805	517	8	12	7	497	528	421	5	10	5	1980	2210	1420	22	32	19
1961	Jan.	31.0	4	4	3	3580	4140	3010	830	961	699	8	9	7	534	586	489	5	6	5	2280	2630	1920	22	25	19
	Feb.	28.0	3	4	3	3840	4750	3120	889	1100	724	7	8	6	560	639	498	4	5	4	2440	3020	1980	20	23	16
	Mar.	31.0	538	956	3	3570	4840	3470	828	1120	806	1200	2100	8	537	647	528	778	1370	5	2270	3080	2210	3290	5760	23
	Apr.	30.0	388	879	7	3620	3840	3560	839	891	825	877	2010	17	541	560	536	565	1290	11	2300	2660	2260	2400	5520	46
	May	31.0	415	729	3	3670	3950	3440	850	917	798	949	1710	8	546	570	526	610	1090	5	2330	2510	2190	2550	4670	23
	June	30.0	278	729	4	3760	4180	3630	872	969	843	652	1720	9	556	590	542	415	1090	6	2390	2660	2310	1790	4720	23
	July	31.0	216	652	3	3890	4090	3730	901	948	865	524	1570	8	564	582	551	328	987	5	2470	2600	2370	1440	4300	23
	Aug.	31.0	416	779	295	3930	3990	3800	910	926	882	1020	1920	709	568	573	557	637	1200	448	2500	2560	2420	2800	5270	1940
	Sept	30.0	38	443	4	3680	4230	3170	900	982	736	92	1090	9	564	594	503	58	676	6	2470	2690	2020	253	2980	25
SUMMARY		365.0	222	956	3	3690	4840	2230	855	1120	517	316	2100	6	547	647	421	330	1370	4	2360	3080	1420	1610	5760	16
1961	Oct.	31.0	89	149	3	3980	4260	3740	922	988	848	220	377	8	572	596	552	136	232	5	2530	2710	2380	603	1030	21
	Nov.	30.0	42	142	3	4000	4190	3470	926	971	805	106	362	8	574	591	528	65	223	5	2560	2660	2210	290	993	21
	Dec.	31.0	3	4	3	4130	4310	3770	957	1000	874	8	10	8	585	601	556	5	6	5	2620	2740	2400	23	27	21
1962	Jan.	31.0	53	156	3	4180	4460	3790	968	1030	878	138	403	7	589	614	556	84	245	4	2650	2830	2410	378	1110	20
	Feb.	28.0	103	366	3	4280	4640	4080	993	1080	967	276	967	8	599	629	581	166	586	5	2720	2950	2600	756	2650	21
	Mar.	31.0	128	133	122	4520	4650	4300	1050	1080	998	362	382	349	619	630	600	216	224	206	2870	2960	2740	993	1050	956
	Apr.	30.0	89	450	3	4620	4840	3820	1070	1120	886	257	1300	10	628	647	559	151	763	5	2940	3080	2630	705	3570	26
	May	31.0	216	654	3	4750	4950	4280	1100	1150	993	641	2020	10	639	656	598	372	1160	6	3020	3150	2720	1760	5550	26
	June	30.0	6	9	4	4890	5200	4670	1130	1210	1060	18	26	12	651	678	615	10	15	7	3110	3310	2840	49	71	32
	July	31.0	277	532	5	4760	5010	4450	1100	1160	1030	821	1600	13	638	661	613	477	923	8	3010	3190	2830	2250	4390	36
	Aug.	31.0	367	496	5	4580	4680	4390	1060	1090	1020	1050	1610	14	624	633	608	617	826	8	2910	2970	2790	2880	3860	39
	Sept	30.0	9	131	4	4330	4760	2650	1000	1100	568	25	376	10	602	638	440	15	221	6	2750	3020	1560	68	1030	28
SUMMARY		365.0	115	656	3	4540	5200	2650	1050	1210	568	330	2020	7	621	678	440	194	1160	4	2890	3310	1560	904	5550	20

MONTHLY SUMMARY OF CONTINUOUS RECORDED FLOW AND QUALITY DATA

River Basin: Red

Station Numbers: USGS: 3119.00

Stream and Location: Wichita River near Seymour, Texas
Lat. 33°42'00", long. 99°23'10", on bridge of Ranch Road 1919, 10½ mi. NW of Seymour, Baylor County, Texas, and 6 mi. upstream from head of Lake Kemp.

Main Stream Flow: 218 cfs Range: 158-279 cfs Years: 2

Equations Used to Compute Concentrations From Specific Conductance

	Number Samples		Equations	Std. Error	Correl. Coeff.
Dissolved Solids:	26	TDS = 0.6898	Sp. C.	539.	0.9930
Chlorides:	140	Log Cl = 1.1905	Log Sp. C.-1.3329	0.0285	0.9968
Sulfates:	140	Log SO_4 = 0.8064	Log Sp. C.-0.0992	0.0569	0.9731

Remarks: Records fair. Occasional minor stratification. Instantaneous conductivity range 470-24,500 micromhos. The flow recurrence intervals for water years 1961-1962 are 4.00 and 1.33 respectively.

Year	Month	Number of Days of Specific Conductance Record	STREAM FLOW Cubic Feet/Second Mean	STREAM FLOW Extremes Max. Day	STREAM FLOW Extremes Min. Day	SPECIFIC CONDUCTANCE Micromhos/Centimeter @ 25° C Wt. Mean	SPECIFIC CONDUCTANCE Extremes Max. Day	SPECIFIC CONDUCTANCE Extremes Min. Day	CHLORIDES (Cl) Milligrams/Liter Wt. Mean	CHLORIDES (Cl) Milligrams/Liter Extremes Max. Day	CHLORIDES (Cl) Milligrams/Liter Extremes Min. Day	CHLORIDES (Cl) Tons/Day Wt. Mean	CHLORIDES (Cl) Tons/Day Extremes Max. Day	CHLORIDES (Cl) Tons/Day Extremes Min. Day	SULFATES (SO_4) Milligrams/Liter Wt. Mean	SULFATES (SO_4) Milligrams/Liter Extremes Max. Day	SULFATES (SO_4) Milligrams/Liter Extremes Min. Day	SULFATES (SO_4) Tons/Day Wt. Mean	SULFATES (SO_4) Tons/Day Extremes Max. Day	SULFATES (SO_4) Tons/Day Extremes Min. Day	DISSOLVED SOLIDS (103° C) Milligrams/Liter Wt. Mean	DISSOLVED SOLIDS (103° C) Milligrams/Liter Extremes Max. Day	DISSOLVED SOLIDS (103° C) Milligrams/Liter Extremes Min. Day	DISSOLVED SOLIDS (103° C) Tons/Day Wt. Mean	DISSOLVED SOLIDS (103° C) Tons/Day Extremes Max. Day	DISSOLVED SOLIDS (103° C) Tons/Day Extremes Min. Day
1960	July	31.0	485	5580	9	2160	8080	1250	630	2320	220	561	6750	56	388	1220	248	507	4910	28	1490	6130	861	1940	18100	142
	Aug.	31.0	98	1010	6	3640	16600	1552	798	5000	290	210	1600	58	592	2010	297	156	1310	26	2510	11400	1070	660	5320	143
	Sept	30.0	11	114	0	6150	14000	4250	1690	400	960	44	384	2	902	1750	670	26	218	1	4240	9660	2930	123	1060	5
	SUMMARY	92.0	198	5580	0	2670	16600	0	505	5000	0	271	6460	0	633	2010	0	233	4910	0	1710	11400	0	917	18100	0
1960	Oct.	31.0	1465	15100	8	1360	15960	500	265	4600	76	967	5990	61	266	1950	120	1040	7660	25	922	11000	345	3640	24870	116
	Nov.	30.0	72	148	45	13430	16660	10480	3820	6890	2800	737	1140	596	1700	2030	1380	328	552	269	9270	11490	7230	1790	2890	1400
	Dec.	31.0	131	716	45	10490	16960	7200	2860	5000	1800	1010	3880	598	1390	2050	1020	491	2120	246	7240	11690	4970	2560	10420	1400
1961	Jan.	31.0	50	93	31	16100	18000	14630	4730	5400	4100	637	1040	427	1960	2150	1790	264	650	172	11100	12620	9950	1490	2490	990
	Feb.	28.0	58	99	40	15960	17300	13170	4690	5180	3690	729	1000	564	1950	2080	1660	304	448	223	11010	11930	9080	1710	2450	1280
	Mar.	31.0	266	1630	34	5190	19000	2460	1230	5710	530	817	3990	498	789	2250	631	524	2710	198	3580	13110	1700	2380	11930	1150
	Apr.	30.0	62	400	20	9830	18380	2980	2630	5500	635	440	686	297	1320	2180	503	220	565	117	6780	12680	2060	1130	2220	681
	May	31.0	615	3610	19	3650	19000	1350	808	5710	267	903	2400	294	593	2250	266	663	2590	115	2520	13110	931	2550	9030	672
	June	30.0	115	616	28	9530	18030	3510	2560	5630	775	788	2930	320	1290	2150	574	400	1620	161	6570	12440	2420	2040	7450	826
	July	31.0	611	6960	36	2870	14460	1210	608	4100	215	673	2870	137	489	1790	243	561	3250	90	1980	9970	833	2190	11140	408
	Aug.	31.0	114	1530	6	3320	12090	1760	724	3330	330	223	1380	69	550	1550	327	169	1330	23	2290	8340	1200	706	4940	125
	Sept	30.0	172	2970	3	2900	14060	1830	616	4700	350	285	2840	29	493	1950	338	228	2710	13	2000	11060	1260	926	10110	71
	SUMMARY	365.0	276	15100	3	3730	19000	500	830	5710	76	625	5990	29	604	2250	120	455	7660	13	2570	13110	345	1940	24870	71
1961	Oct.	31.0	49	393	12	9030	17290	2800	2380	5150	850	313	1210	103	1230	2080	614	162	562	74	6230	11930	2620	821	3000	316
	Nov.	30.0	167	2340	30	6630	15780	1930	1070	4610	380	484	2390	287	719	1930	351	324	2240	145	3190	10890	1330	1440	8400	748
	Dec.	31.0	30	39	26	17120	18180	14710	5090	5480	4250	409	213	372	2060	2180	1820	166	212	149	11810	12540	10150	958	1200	863
1962	Jan.	31.0	26	34	16	17850	19440	16220	5350	5880	4800	381	486	262	2140	2280	1960	152	196	95	12310	13610	11190	877	1120	552
	Feb.	28.0	21	23	19	19670	20350	18230	6010	6250	5650	333	375	303	2310	2370	2180	128	140	117	13570	14040	12580	752	842	686
	Mar.	31.0	16	22	11	20270	21610	18530	6230	6700	5600	265	357	197	2370	2680	2210	101	138	73	13980	14910	12780	595	812	439
	Apr.	30.0	150	2600	11	6300	22000	1920	986	6800	372	620	2600	192	678	2530	352	289	2670	72	2970	15180	1320	1270	9280	423
	May	31.0	33	163	7	10620	18100	3750	2820	5500	825	252	1560	89	1380	2170	608	124	618	63	7190	12490	2590	643	3560	226
	June	30.0	679	3580	15	2230	11220	962	451	3080	165	825	3720	96	399	1470	202	730	3470	68	1560	7760	662	2820	13050	250
	July	31.0	72	286	18	6530	16960	2660	1620	4260	500	314	763	102	969	1850	429	184	358	57	4510	10320	1680	875	1870	277
	Aug.	31.0	44	634	2	6030	14850	1350	910	4230	263	108	677	24	662	1830	284	76	360	11	2780	10240	931	331	1800	58
	Sept	30.0	605	6140	13	1790	8180	599	367	2110	95	565	2110	28	335	1140	138	546	1590	21	1240	5640	613	2020	6710	87
	SUMMARY	365.0	150	6140	2	3830	22000	599	656	6800	95	362	3720	24	617	2530	138	261	3470	11	2640	15180	613	1120	13050	58

MONTHLY SUMMARY OF CONTINUOUS RECORDED FLOW AND QUALITY DATA

River Basin: Red

Station Numbers: PRS: 756 USGS: 3118.00

Stream and Location: South Fork of the Wichita River near Benjamin, Texas Lat. 33°38'35", long. 99°47'55", at bridge on State Hwy 283, 4 mi. north of Benjamin, Knox County, Texas, and 34 river mi. upstream from the confluence with the North Fork Wichita River.

Main Stream Flow: 34 cfs **Range:** 32-76 cfs **Years:** 2

Remarks: Records fair. Stratification nil. Instantaneous conductivity range 500-50,000 micromhos. The flow recurrence intervals for water years 1961-1962 are 4.00 and 1.33 respectively.

Equations Used to Compute Concentrations From Specific Conductance

	Number Samples	Equations	Std. Error	Correl. Coeff.
Dissolved Solids:	25	TDS = 0.7177 Sp. C.	1180.	0.9891
Chlorides:	167	Log Cl = 1.2136 Log Sp. C.-1.4618	0.0276	0.9961
Sulfates:	167	Log SO_4 = 0.6311 Log Sp. C.+0.6483	0.0570	0.9435

Year	Month	Number of Days of Specific Conductance Record	STREAM FLOW Cubic Feet/Second Mean	STREAM FLOW Extremes Max. Day	STREAM FLOW Extremes Min. Day	SPECIFIC CONDUCTANCE Micromhos/Centimeter @ 75° F Wt. Mean	SPECIFIC CONDUCTANCE Extremes Max. Day	SPECIFIC CONDUCTANCE Extremes Min. Day	CHLORIDES (Cl) Milligrams/Liter Wt. Mean	CHLORIDES (Cl) Milligrams/Liter Extremes Max. Day	CHLORIDES (Cl) Milligrams/Liter Extremes Min. Day	CHLORIDES (Cl) Tons/Day Wt. Mean	CHLORIDES (Cl) Tons/Day Extremes Max. Day	CHLORIDES (Cl) Tons/Day Extremes Min. Day	SULFATES (SO_4) Milligrams/Liter Wt. Mean	SULFATES (SO_4) Milligrams/Liter Extremes Max. Day	SULFATES (SO_4) Milligrams/Liter Extremes Min. Day	SULFATES (SO_4) Tons/Day Wt. Mean	SULFATES (SO_4) Tons/Day Extremes Max. Day	SULFATES (SO_4) Tons/Day Extremes Min. Day	DISSOLVED SOLIDS (103° C) Milligrams/Liter Wt. Mean	DISSOLVED SOLIDS (103° C) Milligrams/Liter Extremes Max. Day	DISSOLVED SOLIDS (103° C) Milligrams/Liter Extremes Min. Day	DISSOLVED SOLIDS (103° C) Tons/Day Wt. Mean	DISSOLVED SOLIDS (103° C) Tons/Day Extremes Max. Day	DISSOLVED SOLIDS (103° C) Tons/Day Extremes Min. Day
1960	July	26.5	97	1360	0	3580	21600	1480	827	6750	258	134	906	7	780	2650	642	126	961	12	2570	15500	1060	417	3070	29
	Aug.	4.5	19	316	0	18600	18600	18600	5630	5630	5630	51	51	51	2210	2210	2230	20	20	20	13400	13400	13400	121	121	121
	Sept	20.7	2	13	0	7840	12100	6630	2010	3320	1060	30	135	7	1280	1720	920	19	68	4	5630	8660	3320	85	353	20
	SUMMARY	27.0	39	1360	0	3750	21600	1480	869	6750	258	110	906	7	800	2650	642	101	934	4	2690	15500	1060	341	3070	20
1960	Oct.	31.0	492	7810	0.1	2185	33000	1280	415	11240	216	550	4350	3	570	3160	407	755	8550	1	1570	23680	919	2080	19300	6
	Nov.	30.0	18	32	10	22020	27270	18120	6880	8920	5430	325	473	238	2450	2800	2170	116	188	76	15800	19570	13000	748	1110	524
	Dec.	31.0	14	25	10	23990	27100	20930	7630	8850	6460	286	495	232	2590	2790	2370	97	172	74	17210	19450	15020	645	1110	513
1961	Jan.	31.0	11	15	8	25380	26800	24640	8170	8730	7880	239	321	188	2680	2770	2630	78	107	60	18210	19230	17680	532	720	415
	Feb.	28.0	11	15	8	26800	48920	17150	8730	18140	5070	244	567	135	2770	4050	2090	78	133	56	19240	35110	12310	562	1110	328
	Mar.	31.0	28	343	5	11010	29100	5000	2960	9650	1130	221	1060	129	1580	2920	961	118	895	41	7910	20890	3590	588	3340	284
	Apr.	30.0	10	38	4	20940	29100	9500	6470	9650	2470	163	256	90	2370	2920	1440	60	149	27	15030	20890	6820	380	706	196
	May	31.0	234	2990	4	3980	32900	1560	859	11200	275	542	3830	82	832	3160	461	525	4760	27	2860	23610	1120	1830	13960	183
	June	30.0	26	212	6	14110	25490	7350	4000	8220	1810	276	1410	135	1850	2690	1230	127	821	46	10120	18290	5280	698	3870	310
	July	31.0	27	245	3	7420	25720	2110	1830	8310	397	132	655	41	1230	2700	538	89	103	22	5320	18460	1510	384	1810	138
	Aug.	31.0	2	15	0	16860	28080	--	4970	9230	--	25	135	0	2070	2850	--	11	49	0	12100	20140	--	62	313	0
	Sept	31.0	30	381	0	5220	25900	--	1190	8380	--	98	955	0	987	2710	--	81	1090	0	3740	18590	--	307	3370	0
	SUMMARY	365.0	75	7810	0	4940	48920	--	1120	18140	--	229	4350	0	934	4050	--	196	8550	0	3550	35110	--	727	19300	0
1961	Oct.	31.0	5	20	1	24390	28960	18080	7790	9590	5410	102	390	23	2610	2910	2160	34	127	8	17510	20780	12980	229	810	51
	Nov.	30.0	20	261	6	20880	26940	10390	6450	8790	2760	353	5110	99	2370	2780	1520	130	1780	36	14980	19330	7460	820	11640	229
	Dec.	31.0	7	9	5	27780	29000	26350	9120	9610	8550	176	226	126	2840	2910	2740	55	68	40	19940	20810	18910	385	488	277
1962	Jan.	31.0	7	10	4	29270	30950	28120	9720	10400	9260	194	257	114	2930	3040	2840	58	80	34	21010	22210	20180	419	555	251
	Feb.	28.0	5	6	4	32020	33880	30000	10840	11610	10010	148	165	116	3100	3210	2980	42	46	34	22980	24320	21530	314	346	247
	Mar.	31.0	5	6	4	34000	35950	32900	11660	12480	11200	158	193	115	3220	3340	3160	44	53	31	24400	25800	23610	332	403	238
	Apr.	30.0	28	437	3	8170	36750	2500	2060	12820	488	155	574	26	1310	3380	621	98	730	30	3860	26380	1790	440	2110	93
	May	31.0	5	20	1	24050	34120	15000	7650	11710	4310	103	362	16	2590	3230	1920	35	131	4	17260	24490	10770	232	837	33
	June	30.0	149	810	7	3640	22060	1700	770	6890	304	309	1260	19	786	3450	486	313	1050	17	2610	15830	1220	1050	4060	61
	July	31.0	10	40	1	10760	24620	2260	2880	7880	432	78	218	3	1560	2630	582	42	141	2	7720	17670	1620	209	624	7
	Aug.	31.0	4	62	0	15820	34120	--	4600	11710	--	43	413	0	1990	3230	--	19	124	0	11350	24490	--	106	890	0
	Sept	30.0	144	1080	13	4080	16500	2100	886	4840	395	345	1740	84	846	2040	556	329	1580	76	2930	11840	1510	1140	5540	272
	SUMMARY	365.0	32	1080	0	7610	36750	--	1890	12820	--	163	5110	0	1253	3380	--	108	1780	0	5460	26380	--	472	11640	0

MONTHLY SUMMARY OF CONTINUOUS RECORDED FLOW AND QUALITY DATA

Basin: Red Station Numbers: PWS: 757 USGS: 3117.00

Stream and location: North Fork Wichita River near Truscott, Texas
Lat. 33°49'10", long. 99°47'10", at bridge on State Hwy 283, 4½ mi. north of Truscott, Knox County, Texas, approximately 33 river mi. upstream from the confluence with the South Fork of the Wichita River

Main Stream Flow: 52 cfs Range: 37-67 cfs Years: 2

Equations Used to Compute Concentrations From Specific Conductance

	Number Samples		Equations	Std. Error	Correl. Coeff.
Dissolved Solids:	27	TDS = 0.6942	Sp. C.	546.	0.9910
Chlorides:	140	Log Cl = 1.1926	Log Sp. C.-1.3468	0.0256	0.9956
Sulfates:	140	Log SO_4 = 0.7618	Log Sp. C.+0.1146	0.0493	0.9624

Remarks: Records fair. Stratification nil. Instantaneous conductivity range 680-25,200 micromhos. The flow recurrence intervals for water years 1961-1962 are 4.00 and 1.33 respectively.

Year	Month	Number of Days of Specific Conductance Record	STREAM FLOW Cubic Feet/Second Mean	Extremes Max. Day	Extremes Min. Day	SPECIFIC CONDUCTANCE Micromhos/Centimeter @ 25° C Wt. Mean	Extremes Max. Day	Extremes Min. Day	CHLORIDES (Cl) Milligrams/Liter Wt. Mean	Extremes Max. Day	Extremes Min. Day	CHLORIDES (Cl) Tons/Day Wt. Mean	Extremes Max. Day	Extremes Min. Day	SULFATES (SO_4) Milligrams/Liter Wt. Mean	Extremes Max. Day	Extremes Min. Day	SULFATES (SO_4) Tons/Day Wt. Mean	Extremes Max. Day	Extremes Min. Day	DISSOLVED SOLIDS (105° C) Milligrams/Liter Wt. Mean	Extremes Max. Day	Extremes Min. Day	DISSOLVED SOLIDS (105° C) Tons/Day Wt. Mean	Extremes Max. Day	Extremes Min. Day
1960	July	20.3	288	3280	11	3560	8600	1610	795	2150	260	162	747	61	660	1280	305	134	511	68	2470	5830	979	504	2030	222
	Aug.	23.9	31	219	8	13400	17900	6900	3790	5300	1740	136	318	52	1820	2250	1100	66	155	35	9330	12400	6790	334	774	152
	Sept	30.0	13	64	5	13100	20900	8060	3700	6400	2050	134	425	50	1780	2560	1230	66	215	27	9060	14500	3600	327	965	129
	SUMMARY	74.0	111	3280	5	6610	20900	1610	1650	6400	260	136	747	50	826	2560	325	87	511	27	4590	14500	979	378	2030	129
1960	Oct.	31.0	350	5960	8	2090	20910	900	411	6220	150	398	2820	122	441	2550	232	427	4140	51	1450	14520	625	1410	11490	292
	Nov.	30.0	26	29	22	44300	17190	9840	4100	5010	2650	284	307	230	1920	2200	1440	133	146	113	9930	11930	6830	687	755	536
	Dec.	31.0	27	49	21	15080	17090	12260	4330	5000	3340	313	507	244	1990	2190	1700	144	242	118	10470	11860	8510	757	1250	600
1961	Jan.	31.0	25	35	20	15900	17080	14800	4610	5000	4220	310	432	265	2070	2190	1960	139	192	108	11040	11960	10270	741	1040	580
	Feb.	28.0	32	48	27	15210	16300	13880	4370	4800	3900	379	539	319	2000	2120	1860	173	250	151	10560	11320	9640	915	1330	780
	Mar.	31.0	61	462	22	7990	18000	3500	2030	5320	750	336	918	322	1220	2280	650	203	800	146	5550	12500	2430	919	2980	785
	Apr.	30.0	25	42	21	15050	18800	7500	4590	5600	1870	309	336	129	2060	2370	1170	139	140	129	11000	13050	5210	760	780	570
	May	31.0	24	87	14	14550	21550	7000	4150	6600	1720	266	420	218	1930	2630	1120	124	266	92	10101	14960	4860	648	1170	508
	June	30.0	44	486	12	9090	20900	4000	2370	6400	880	281	1120	106	1350	2550	730	160	914	69	6310	16510	2780	748	3500	300
	July	31.0	119	930	11	3460	17990	1340	747	5300	239	239	1190	108	646	2260	315	207	1220	68	2600	12490	931	768	4160	303
	Aug.	31.0	26	252	4	7970	19070	2990	2020	5700	620	143	72	51	1220	2340	580	86	392	22	5530	13240	2080	390	1410	121
	Sept	30.0	31	366	3	7250	23130	3000	1810	7200	625	148	754	48	1140	2750	580	93	585	21	5030	16060	2080	413	2310	114
	SUMMARY	365.0	67	5960	3	6080	23130	900	1441	7200	150	261	2820	48	983	2750	232	178	4140	21	4160	16060	625	754	11490	114
1961	Oct.	31.0	21	115	6	14290	23088	4250	4060	7130	950	229	901	103	1910	2740	760	107	324	45	9920	15970	2950	559	1420	243
	Nov.	30.0	34	380	13	10910	19980	3130	2946	5950	660	268	680	169	1550	2460	605	141	619	71	7570	13870	2190	690	2250	393
	Dec.	31.0	19	25	12	18820	20230	16590	5640	6110	4800	290	367	162	2350	2480	2150	121	158	69	13060	14060	11520	673	870	379
1962	Jan.	31.0	18	32	9	17830	20840	16560	5290	6330	4800	261	419	92	2260	2530	1630	111	187	41	12390	14470	8030	611	1000	219
	Feb.	28.0	16	18	11	20680	21500	19890	6280	6610	6000	273	315	181	2520	2610	2450	109	128	74	14300	14930	13810	621	720	419
	Mar.	31.0	14	18	10	21250	23130	19950	6520	7230	6000	266	305	218	2580	2760	2430	97	124	82	14750	16060	13850	556	704	479
	Apr.	30.0	29	359	7	12130	24550	4080	3360	7700	905	256	875	154	1680	2840	735	129	708	46	8420	17040	2830	647	2740	361
	May	31.0	21	205	2	11870	24940	3800	3250	7800	830	183	814	21	1650	2950	700	93	298	9	8240	17310	2640	463	1810	503
	June	30.0	115	737	8	4840	17730	1750	900	5210	328	278	1810	104	728	2250	383	225	1460	65	2810	12310	1210	867	5660	266
	July	31.0	17	103	2	14150	24840	8090	4010	7690	2050	188	913	35	1890	2890	1240	89	648	14	9820	17240	3620	681	7290	293
	Aug.	31.0	17	142	2	10170	22520	4840	2710	6950	1120	124	522	33	1470	2700	835	67	287	13	7060	15630	3360	322	1380	756
	Sept	30.0	121	724	6	3950	18000	1610	877	5320	295	286	1740	104	716	2260	360	233	1430	65	2740	12500	1130	894	5500	246
	SUMMARY	365.0	37	737	2	8980	24940	1610	2330	7800	295	230	1810	21	1340	2950	360	132	1460	9	6240	17240	1120	614	5660	219

MONTHLY SUMMARY OF CONTINUOUSLY RECORDED FLOW AND QUALITY DATA

River Basin: Red Station Number: PDS: 771 USGS: 3116.60

Stream and Location: North Fork Wichita River near Paducah, Texas
Lat. 33°32'00", long. 100°.03'50", at bridge on County Road and 12 mi. upstream from Middle Fork, 14 mi. SE of Paducah, Cottle County, Texas.

Mean Stream Flow: 132 cfs Gage: Years: 1

Remarks: Records very good. Stratification nil. Instantaneous conductivity range 1000-38,000 micromhos.

Equations Used to Compute Concentrations From Specific Conductance

	Number Samples	Equations	Std. Error	Correl. Coeff.
Dissolved Solids:	27	TDS = 0.6942	346.	0.9910
Chlorides:	115	Log Cl = 1.1380 Log Sp. C.-1.1025	0.0248	0.9930
Sulfates:	112	SO_4 = 0.1007 Sp. C.	220.	0.9141

Year	Month	Number of Days of Specific Conductance Record	STREAM FLOW: Cubic Feet/Second: Mean	STREAM FLOW: Cubic Feet/Second: Extremes: Max. Day	STREAM FLOW: Cubic Feet/Second: Extremes: Min. Day	SPECIFIC CONDUCTANCE: Micromhos/Centimeter @ 25° C: Wt. Mean	SPECIFIC CONDUCTANCE: Micromhos/Centimeter @ 25° C: Extremes: Max. Day	SPECIFIC CONDUCTANCE: Micromhos/Centimeter @ 25° C: Extremes: Min. Day	CHLORIDES (Cl): Milligrams/Liter: Wt. Mean	CHLORIDES (Cl): Milligrams/Liter: Extremes: Max. Day	CHLORIDES (Cl): Milligrams/Liter: Extremes: Min. Day	CHLORIDES (Cl): Tons/Day: Wt. Mean	CHLORIDES (Cl): Tons/Day: Extremes: Max. Day	CHLORIDES (Cl): Tons/Day: Extremes: Min. Day	SULFATES (SO_4): Milligrams/Liter: Wt. Mean	SULFATES (SO_4): Milligrams/Liter: Extremes: Max. Day	SULFATES (SO_4): Milligrams/Liter: Extremes: Min. Day	SULFATES (SO_4): Tons/Day: Wt. Mean	SULFATES (SO_4): Tons/Day: Extremes: Max. Day	SULFATES (SO_4): Tons/Day: Extremes: Min. Day	DISSOLVED SOLIDS (103° C): Milligrams/Liter: Wt. Mean	DISSOLVED SOLIDS (103° C): Milligrams/Liter: Extremes: Max. Day	DISSOLVED SOLIDS (103° C): Milligrams/Liter: Extremes: Min. Day	DISSOLVED SOLIDS (103° C): Tons/Day: Wt. Mean	DISSOLVED SOLIDS (103° C): Tons/Day: Extremes: Max. Day	DISSOLVED SOLIDS (103° C): Tons/Day: Extremes: Min. Day
1963	Aug.	31.0	0	39	3	20200	27700	9650	6200	8850	2660	135	932	58	2030	2790	969	44	296	19	14000	19200	6680	304	2040	131
	Sept	30.0	0	18	2	24600	26800	20000	7650	8100	6900	158	293	45	2480	2700	2010	50	98	15	17100	18600	13900	355	672	100
		92.0	0	39	2	22300	27700	9620	6900	8850	2660	147	932	45	2250	2790	969	48	296	15	15500	19200	6680	329	2040	100
1963	Nov.	31.0	0	22	5	23020	26230	20660	7270	8440	6440	155	390	103	2320	2640	2080	49	128	33	15980	18210	14360	360	870	227
	Dec.	30.0	12	42	8	20660	22980	14520	6620	7260	4200	208	490	131	2080	2310	1440	67	166	43	14330	15930	10080	465	1150	298
	Dec.	31.0	13	16	11	21610	22330	20630	6770	7020	6420	233	290	200	2190	2250	2080	73	93	64	15000	15500	14320	518	643	442
1964	Jan.	31.0	12	19	7	20310	21730	18370	6300	6820	5620	205	317	129	2030	2190	1850	67	103	42	14100	15100	12750	498	712	287
	Feb.	28.0	10	11	9	20370	23000	21030	6920	7260	6570	196	215	159	2220	2320	2120	62	69	51	15320	15970	14610	429	474	351
	Mar.	31.0	10	13	7	22900	24930	21560	7230	7970	6740	196	251	169	2310	2510	2170	63	81	67	15890	17320	14950	431	556	327
	Apr.	30.0	9	20	6	23750	28090	23750	8260	9120	7530	195	430	128	2590	2830	2390	61	135	40	17880	19500	16490	422	933	275
	May	31.0	7	23	4	28660	30000	19660	8590	9830	6080	160	377	108	2680	3020	1980	50	123	33	18500	20830	13650	345	866	228
	June	30.0	46	210	6	9530	28600	2260	1730	9310	312	216	827	95	650	2880	225	83	246	34	4340	19850	1530	565	1700	237
	July	31.0	10	84	4	25680	27590	6820	6380	8960	1830	175	755	48	2060	2780	688	57	265	17	14220	19150	4740	391	1830	115
	Aug.	31.0	13	207	3	11090	27100	4280	3170	8760	1080	108	605	61	1120	2730	431	38	241	19	7700	18810	2970	263	1660	130
	Sept	30.0	32	304	4	7260	27320	2310	1930	8910	532	108	1035	46	729	2770	233	62	638	17	5030	19100	1600	429	3020	114
		365.0	15	304	3	14960	30000	2260	4450	9830	312	101	1035	46	1510	3020	225	61	638	17	10380	20830	1550	423	3020	114

MONTHLY SUMMARY OF CONTINUOUS RECORDED FLOW AND QUALITY DATA

River Basin: Red Station Numbers: PNS: 500 USGS: 3110.00

Stream and Location: Cache Creek near Walters, Oklahoma
Lat. 34°28', Long. 98°17', SE¼, Sec. 19, T.2 S., R.10 W., on bridge of Hwy 53, 1 3/4 miles east of Walters, Cotton County, Oklahoma, and 19.7 river miles upstream from the mouth.

Main Stream Flow: 101 cfs Range: 13-396 cfs Years: 23

Equations Used to Compute Concentrations From Specific Conductance

	Number Samples	Equations	Std. Error	Correl. Coeff.
Dissolved Solids:	39	TDS = 0.6690 Sp. C.	63	0.9612
Chlorides:	66	Cl = 0.0782 Sp. C.	12	0.7594
Sulfates:	66	SO_4 = 0.1013 Sp. C.	30	0.6985

Remarks: Records good. Stratification nil. Instantaneous conductivity range 125-3700 micromhos. The flow recurrence interval for water year 1981 is 2.19.

Year	Month	Number of Days of Specific Conductance Record	Stream Flow (Cubic Feet/Second) Mean	Extremes Max. Day	Extremes Min. Day	Specific Conductance (Micromhos/Centimeter² at 75° C) Wt. Mean	Extremes Max. Day	Extremes Min. Day	Chlorides (Cl) Milligrams/Liter Wt. Mean	Extremes Max. Day	Extremes Min. Day	Tons/Day Wt. Mean	Extremes Max. Day	Extremes Min. Day	Sulfates (SO_4) Milligrams/Liter Wt. Mean	Extremes Max. Day	Extremes Min. Day	Tons/Day Wt. Mean	Extremes Max. Day	Extremes Min. Day	Dissolved Solids (103° C) Milligrams/Liter Wt. Mean	Extremes Max. Day	Extremes Min. Day	Tons/Day Wt. Mean	Extremes Max. Day	Extremes Min. Day
1980	Feb.	31.0	130	863	21	361	730	153	28	59	12	10	70	3	37	76	16	13	91	6	236	521	99	82	505	23
	Mar.	31.0	26	69	10	669	996	680	52	78	37	3	7	2	68	101	69	6	9	3	636	646	312	28	60	17
	Sept.	30.0	16	27	13	780	835	708	61	65	55	3	5	2	79	86	72	3	6	3	506	562	659	22	38	18
SUMMARY		92.0	57	863	13	662	996	153	35	78	12	5	70	2	65	101	16	7	91	3	287	646	99	66	505	17
1980	Oct.	31.0	507	6020	15	250	797	161	18	62	11	22	200	2	21	81	16	29	239	2	131	510	92	186	1670	15
	Nov.	30.0	68	166	25	582	760	662	66	99	35	6	16	6	57	77	65	7	10	5	365	693	287	68	115	30
	Dec.	31.0	115	709	25	536	1150	327	62	90	26	13	50	6	56	116	33	17	86	5	360	766	212	100	613	33
1981	Jan.	31.0	86	305	61	656	887	660	51	63	36	12	29	7	66	82	66	15	38	9	626	526	286	98	266	54
	Feb.	28.0	96	192	68	737	1100	622	59	86	69	15	32	8	77	111	63	20	61	11	691	715	606	125	263	68
	Mar.	31.0	127	951	26	561	1160	350	62	89	28	16	73	5	55	115	38	19	96	6	351	760	232	120	606	30
	Apr.	30.0	106	800	33	559	866	362	66	87	27	12	50	6	57	87	35	16	75	8	363	561	222	102	679	60
	May	31.0	85	1010	27	591	986	652	68	73	35	10	98	6	60	97	66	16	127	6	386	626	293	88	815	36
SUMMARY		263.0	166	6020	15	621	1150	161	33	90	11	13	200	2	63	116	16	17	239	2	273	766	92	108	1670	15

MONTHLY SUMMARY OF CONTINUOUS RECORDED FLOW AND QUALITY DATA

River Basin: Red

Station Numbers: PHS: 497 USGS: 3085.00

Stream and Location: Red River near Burkburnett, Texas
Lat. 34°06'30", long. 98°32'00", on bridge of U.S. Hwy 277 & 281, 2 mi. NE of Burkburnett, Wichita County, Texas, and at river mile 933.

Main Stream Flow: 1348 cfs Range: 1000-1600 cfs Years: 2

Equations Used to Compute Concentrations From Specific Conductance

	Number Samples		Equations	Std. Error	Correl. Coeff.
Dissolved Solids:	27	TDS	= 0.6906 Sp. C.	328.	0.9480
Chlorides:	155	Log Cl	= 1.1381 Log Sp. C.-1.1371	0.0854	0.9381
Sulfates:	155	SO_4	= 0.1385 Sp. C.	141.	0.8841

Remarks: Records poor. Stratification nil. Instantaneous conductivity range 900-13,000 micromhos. The flow recurrence intervals for water years 1961-1962 are 4.0 and 1.33 respectively.

Year	Month	Number of Days of Specific Conductance Record	STREAM FLOW Cubic Feet/Second			SPECIFIC CONDUCTANCE Micromhos/Centimeter² @ 25° C			CHLORIDES (Cl) Milligrams/Liter			CHLORIDES (Cl) Tons/Day			SULFATES (SO_4) Milligrams/Liter			SULFATES (SO_4) Tons/Day			DISSOLVED SOLIDS (103° C) Milligrams/Liter			DISSOLVED SOLIDS (103° C) Tons/Day		
			Mean	Extremes Max. Day	Extremes Min. Day	Wt. Mean	Extremes Max. Day	Extremes Min. Day	Wt. Mean	Extremes Max. Day	Extremes Min. Day	Wt. Mean	Extremes Max. Day	Extremes Min. Day	Wt. Mean	Extremes Max. Day	Extremes Min. Day	Wt. Mean	Extremes Max. Day	Extremes Min. Day	Wt. Mean	Extremes Max. Day	Extremes Min. Day	Wt. Mean	Extremes Max. Day	Extremes Min. Day
1960	July	24.6	1480	7300	224	5310	7600	2150	1270	1900	452	5890	35600	303	732	1050	297	3390	19700	199	3670	5250	1490	17000	98700	996
	Aug.	24.0	354	1040	94	4920	8850	2170	1170	2260	457	1300	3430	282	680	1220	299	758	1990	185	3400	6110	1500	3790	9970	927
	Sept	20.6	298	1540	89	4240	6540	2020	984	1600	423	905	3670	146	585	902	279	538	2220	96	2930	4520	1400	2700	11100	481
SUMMARY		69.0	7100	7300	89	5070	8850	2020	1210	2260	423	2820	35600	146	700	1220	279	1630	19700	96	3510	6110	1400	8150	98700	481
1960	Oct.	31.0	7950	49380	126	2490	7800	1520	535	1970	306	11470	38930	583	345	1080	209	7390	40260	326	1720	5390	1050	36860	201030	1630
	Nov.	30.0	1020	2320	434	7020	7790	5570	1740	1950	1340	4770	8390	2240	973	1080	771	2670	4850	1240	4850	5380	3850	13290	24860	6170
	Dec.	31.0	1070	2090	398	6730	8700	4450	1660	2230	1030	4770	8200	2110	932	1200	616	2680	4550	1160	4650	6010	3070	13360	22660	5800
1961	Jan.	31.0	682	1110	358	8740	9800	7800	2230	2550	1970	4100	6510	2070	1210	1360	1080	2230	3540	1120	6040	6770	5390	11100	17640	5610
	Feb.	28.0	832	1020	514	7970	8700	7500	2010	2230	1880	4500	5230	4000	1100	1200	1040	2470	2890	1680	5500	6010	5180	12330	14430	8350
	Mar.	31.0	974	3480	412	6930	8800	5600	1720	2260	1360	4500	12680	2350	960	1220	776	2520	7290	1280	4790	6080	3870	12570	36310	6360
	Apr.	30.0	618	1170	203	7020	8500	6600	1740	2180	1630	2900	5500	1090	972	1180	914	1618	5950	3070	4850	5870	4560	8070	15280	2970
	May	31.0	424	1210	104	5530	7600	3500	1330	1900	790	1520	5720	441	765	1050	485	875	3180	250	3820	5250	2420	4360	15830	1240
	June	30.0	3010	14200	94	2870	10000	1320	629	2600	258	5100	17240	551	398	1390	183	3230	9180	300	1980	6910	912	16080	45800	1500
	July	31.0	1930	9170	95	4360	9000	1330	1010	2310	260	5260	20550	357	604	1250	183	3140	12530	205	3010	6220	916	15670	62420	1020
	Aug.	31.0	167	488	66	6600	7600	4680	1620	1900	1190	729	2220	340	915	1050	648	411	1240	187	4560	5250	3230	2050	6200	932
	Sept	30.0	391	1580	49	2880	8000	1800	630	2020	370	663	1770	260	398	1110	249	419	1180	142	1990	5520	1240	2090	5880	711
SUMMARY		365.0	1590	49380	49	4130	10000	1320	952	2600	258	4100	38930	260	573	1390	183	2470	40260	142	2855	6910	912	12300	201030	711
1961	Oct.	31.0	268	1810	66	2940	7000	1800	646	1730	370	467	1800	268	407	970	249	294	1220	160	2030	4830	1240	1470	6070	796
	Nov.	30.0	1190	7600	84	3700	8500	1800	839	2170	370	2690	7580	381	512	1180	249	1640	5110	213	2560	5870	1240	8200	25520	1070
	Dec.	31.0	279	380	193	8070	8760	7470	2040	2240	1890	1530	2180	997	1120	1210	1030	839	1180	551	5510	6050	5160	4180	5900	2750
1962	Jan.	31.0	262	742	105	7820	9600	6000	1970	2480	1450	1390	3800	690	1080	1330	831	763	2100	372	5400	6630	4140	3810	10470	1840
	Feb.	28.0	200	377	123	8610	9450	7470	2200	2440	1800	1180	2150	702	1190	1310	1030	643	1160	382	5950	6530	5160	3200	5820	1910
	Mar.	31.0	127	180	67	8710	10200	7620	2220	2660	1910	758	1030	468	1210	1410	1060	412	561	249	6010	7040	5260	2050	2810	1240
	Apr.	30.0	592	6058	60	6440	12880	4950	1580	3470	1170	2510	20920	388	891	1780	685	1420	12100	208	4450	8900	3420	7090	60470	1040
	May	31.0	508	2030	79	4950	9760	1850	1170	2530	381	1600	8270	411	686	1350	255	938	4690	273	3420	6740	1280	4680	23400	1360
	June	30.0	6200	18360	1120	3010	7150	1240	664	1780	242	11090	48800	1200	417	990	171	6970	29630	846	2080	4940	857	34730	142740	4240
	July	31.0	569	2750	153	5910	9390	3420	1430	2420	767	2190	10620	662	819	1300	474	1260	6030	373	4080	6490	2360	6260	30050	1870
	Aug.	31.0	549	3470	51	4830	7600	3670	1140	1900	831	1680	9670	239	668	1050	507	989	5730	134	3330	5250	2540	4930	28550	671
	Sept	30.0	1250	5700	61	2890	7060	1440	633	1750	288	2140	1380	216	399	978	199	1350	4300	128	2000	4880	998	6740	23950	642
SUMMARY		365.0	1000	18360	51	3930	12880	1240	898	3470	242	2400	48800	216	544	1780	171	1450	28630	128	2710	8900	857	7250	142740	642

MONTHLY SUMMARY OF CONTINUOUS RECORDED FLOW AND QUALITY DATA

River Basin: Red

Station Numbers: PHS: 759 USGS: 3082.00

Stream and Location: Pease River near Vernon, Texas
Lat. 34°10'35", long. 99°16'50", on bridge of U. S. Hwy 283, 1.5 mi. north of Vernon, Wilbarger County, Texas, and at river mile 10 above mouth.

Equations Used to Compute Concentrations From Specific Conductance

	Number Samples	Equations	Std. Error	Correl. Coeff.
Dissolved Solids:	27	TDS = 0.6752 Sp. C.	526.	0.9817
Chlorides:	134	Log Cl = 1.2327 Log Sp. C.-1.5190	0.0342	0.9963
Sulfates:	134	Log SO_4 = 0.7967 Log Sp. C.-0.0260	0.0658	0.9683

Main Stream Flow: 156 cfs Range: 143-160 cfs Years: 2

Remarks: Records poor. Stratification nil. Instantaneous conductivity range 380-17,800 micromhos. The flow recurrence intervals for water years 1961-1962 are 4.00 and 1.33 respectively.

Year	Month	Number of Days of Specific Conductance Record	STREAM FLOW Cubic Feet/Second Mean	Extremes Max. Day	Extremes Min. Day	SPECIFIC CONDUCTANCE Micromhos/Centimeter² @ 25° C Wt. Mean	Extremes Max. Day	Extremes Min. Day	CHLORIDES (Cl) Milligrams/Liter Wt. Mean	Extremes Max. Day	Extremes Min. Day	Tons/Day Wt. Mean	Extremes Max. Day	Extremes Min. Day	SULFATES (SO_4) Milligrams/Liter Wt. Mean	Extremes Max. Day	Extremes Min. Day	Tons/Day Wt. Mean	Extremes Max. Day	Extremes Min. Day	DISSOLVED SOLIDS 103° C Milligrams/Liter Wt. Mean	Extremes Max. Day	Extremes Min. Day	Tons/Day Wt. Mean	Extremes Max. Day	Extremes Min. Day
1960	July	23.5	396	2880	3	3620	9110	2270	745	2340	415	652	5050	16	643	1350	445	563	4210	10	2450	6150	1530	2140	16300	43
	Aug.	23.9	69	753	0	3740	10200	1700	770	2660	292	65	359	1	660	1480	355	55	236	2	2530	6880	1150	214	1020	2
	Sept	6.0	14	132	0	--	--	--	--	--	--	0	0	0	--	--	--	0	0	0	--	--	--	0	0	0
SUMMARY		38.0	159	2880	0	3590	10200	1700	740	2660	292	426	5050	1	640	1480	355	368	4210	2	2420	6880	1150	1390	16300	2
1960	Oct.	31.0	1060	13240	1	1709	10500	900	292	2770	133	835	6440	12	354	1520	212	1010	9510	7	1150	7090	608	3300	28970	32
	Nov.	30.0	40	83	20	11180	12000	10600	2960	3280	2770	315	651	172	1580	1680	1520	168	340	90	7550	8100	7160	803	1630	427
	Dec.	31.0	60	123	20	10420	15080	8000	2720	4330	1980	440	1300	132	1500	2010	1220	243	603	75	7040	10180	5400	1140	3050	346
1961	Jan.	31.0	47	99	16	12130	13410	10000	3270	3750	2600	411	1160	158	1690	1830	1450	212	540	78	8190	9050	6750	1030	2730	386
	Feb.	28.0	90	285	26	9840	14200	6200	2530	4040	1450	617	1040	227	1430	1900	985	348	661	115	6650	9500	4190	1620	2890	556
	Mar.	31.0	144	855	16	5520	14200	1400	1240	4040	230	480	914	154	901	1900	302	349	794	76	3720	9590	945	1440	3000	374
	Apr.	30.0	37	139	11	10010	13080	5960	2580	3620	1380	258	543	95	1450	1800	960	145	353	48	6760	8830	4020	675	1520	235
	May	31.0	6	14	1	10290	12520	9690	2670	3470	2510	44	98	21	1480	1750	1420	24	49	10	6950	8450	6540	114	243	51
	June	30.0	119	742	1	5790	11500	1000	1320	3100	153	421	2840	3	937	1620	230	300	1960	1	3910	7760	675	1250	8250	7
	July	31.0	358	2100	2	3580	12000	1910	728	3280	338	702	3620	17	639	1670	387	617	2860	9	2420	8100	1290	2330	11270	44
	Aug.	31.0	23	162	0.1	6360	9500	4290	1480	2460	920	91	808	1	1100	1380	720	68	488	1	4290	6410	2900	266	2180	2
	Sept	30.0	27	530	0	2370	9000	--	438	2300	--	32	511	0	460	1340	--	34	574	0	1600	6080	--	118	1940	0
SUMMARY		365.0	168	13240	0	3780	15080	--	777	4330	--	355	6440	0	667	2010	--	305	9510	0	2550	10180	--	1165	28970	0
1961	Oct.	31.0	0.1	1	0	6560	9500	--	1540	2460	--	0	3	0	1040	1380	--	0	3	0	4430	6410	--	1	11	0
	Nov.	30.0	35	516	1	4020	14950	1640	838	4300	280	80	364	7	700	2000	345	66	449	4	2710	10100	1100	258	1440	18
	Dec.	31.0	8	13	5	12310	13240	10900	3340	3700	2930	68	110	39	1710	1810	1550	35	54	20	8310	8940	7360	169	267	95
1962	Jan.	31.0	6	14	2	11450	14320	9030	3050	4050	2000	51	120	24	1610	1930	1340	27	63	11	7730	9670	6100	130	303	58
	Feb.	28.0	3	6	1	12170	14070	9370	3290	3980	2420	25	73	7	1690	1900	1380	13	36	4	8210	9500	6330	63	179	19
	Mar.	31.0	2	3	1	9930	11100	8150	2560	2950	2040	11	26	5	1440	1570	1240	6	15	3	6710	7490	5500	28	68	13
	Apr.	30.0	87	1360	1	3070	17290	1100	601	5100	170	140	1490	6	565	2250	248	132	1330	4	2070	11670	742	484	4990	17
	May	31.0	14	128	0	7200	13040	--	1720	3600	--	63	650	0	1120	1800	--	41	332	0	4860	8800	--	178	1600	0
	June	30.0	940	9770	20	2730	11060	1180	522	2950	187	1320	4750	80	515	1560	265	1300	7010	55	1840	7470	799	4670	21360	230
	July	31.0	273	1900	1	3710	15150	1220	759	4350	191	559	5940	5	657	2020	268	484	4310	3	2500	10230	820	1840	17770	13
	Aug.	31.0	65	1110	0	2080	10150	--	372	2630	--	65	652	0	414	1460	--	72	843	0	1400	6850	--	245	2700	0
	Sept	30.0	285	3420	0.2	3110	10110	1140	612	2610	180	470	2410	1	571	1460	255	439	3030	1	2100	6820	772	1620	9730	3
SUMMARY		365.0	143	9770	0	3110	17290	--	612	5100	--	234	5940	0	571	2250	--	219	7010	0	2100	11670	--	804	21360	0

MONTHLY SUMMARY OF CONTINUOUS RECORDED FLOW AND QUALITY DATA

River Basin: B-2 Station Numbers: PHS: 755 USGS: 3034.00

Stream and Location: Pease River near Childress, Texas
Lat. 34°13'35", long. 100°04'20", on bridge of Farm Road 104, 17 mi. SE of Childress, Childress County, Texas

Equations Used to Compute Concentrations From Specific Conductance

	Number Samples	Equations	Std. Error	Correl. Coeff.
Dissolved Solids:	28	TDS = 0.7125 Sp. C.	1429.	0.9786
Chlorides:	134	Log Cl = 1.2008 Log Sp. C.-1.3728	0.0284	0.9960
Sulfates:	134	SO_4 = 0.0924 Sp. C.	282.	0.9250

Main Stream Flow: 89 cfs Range: 76-103 cfs Years: 2

Remarks: Records fair. Stratification nil. Instantaneous conductivity range 800-41,000 micromhos. The flow recurrence intervals for water years 1961-1962 are 4.00 and 1.33 respectively.

		Number of Days of Specific Conductance Record	STREAM FLOW Cubic Feet/Second			SPECIFIC CONDUCTANCE Micromhos/Centimeter² @ 25° C			CHLORIDES (Cl) Milligrams/Liter			CHLORIDES (Cl) Tons/Day			SULFATES (SO_4) Milligrams/Liter			SULFATES (SO_4) Tons/Day			DISSOLVED SOLIDS (103° C) Milligrams/Liter			DISSOLVED SOLIDS (103° C) Tons/Day		
				Extremes			Extremes			Extremes			Extremes			Extremes			Extremes			Extremes			Extremes	
Year	Month		Mean	Max. Day	Min. Day	Wt. Mean	Max. Day	Min. Day	Wt. Mean	Max. Day	Min. Day	Wt. Mean	Max. Day	Min. Day	Wt. Mean	Max. Day	Min. Day	Wt. Mean	Max. Day	Min. Day	Wt. Mean	Max. Day	Min. Day	Wt. Mean	Max. Day	Min. Day
1960	July	11.4	177	1230	2	12200	24700	6990	3380	7950	1730	495	2750	36	1120	2270	643	164	890	10	8700	17600	4980	1274	6900	81
	Aug.	2.4	81	800	1	22400	23200	21800	7000	7300	6800	29	31	28	2060	2130	2000	9	9	8	16000	16500	15500	67	70	63
	Sept	24.3	9	94	1	25900	29700	22200	8400	9900	6900	207	2130	31	2380	2730	2040	59	602	9	18500	21200	15800	455	4670	68
SUMMARY		38.0	89	1230	1	15800	29700	6990	4630	9900	1730	279	2750	28	1450	2730	643	87	890	8	11200	21200	4980	676	6900	63
1960	Oct.	31.0	619	9740	3	3570	28500	3010	782	9430	639	1300	1160	75	330	2630	278	550	5420	21	2540	20310	2150	4240	41750	163
	Nov.	30.0	11	33	7	24540	32500	22060	7920	11180	6900	230	543	125	2270	3000	2040	66	156	36	17480	23160	15720	508	1200	284
	Dec.	31.0	32	108	7	17310	32130	13430	5210	10950	4830	448	1450	184	1600	2970	1240	138	450	52	12330	22890	9570	1060	3470	400
1961	Jan.	31.0	26	92	6	17530	28480	7910	5290	9420	2030	363	714	141	1620	2630	730	111	233	39	12490	20290	5640	858	1800	304
	Feb.	28.0	47	206	3	13220	27000	6000	3770	8880	1470	476	1140	69	1220	2500	550	154	334	20	9420	19240	4280	1190	2580	134
	Mar.	31.0	42	289	4	18290	26000	7200	5560	8460	1820	631	6010	97	1690	2400	665	192	1730	29	13030	18550	5130	1480	13340	215
	Apr.	30.0	7	26	2	27110	30240	23570	8920	10180	7520	165	532	70	2510	2790	2180	46	153	19	19320	21550	16790	357	1180	149
	May	31.0	4	18	2	28470	32170	24060	9460	10960	7690	93	387	43	2630	2970	2220	26	111	12	20280	22920	17140	201	857	93
	June	30.0	130	1280	1	8910	29780	3950	2360	9950	882	829	3050	34	823	2750	365	289	1270	10	6350	21220	2810	2230	9760	75
	July	31.0	248	1400	2	5010	26380	3000	1180	8600	635	786	3440	37	463	2440	277	310	1390	11	3570	18800	2140	2390	10710	82
	Aug.	31.0	49	611	1	8410	25150	6400	2190	8090	1580	286	2640	8	777	2320	590	102	990	2	5990	17920	4560	784	7640	17
	Sept	30.0	12	114	1	17410	29670	5700	5240	9870	1370	163	529	32	1610	2740	527	50	784	9	12400	21140	4060	386	1420	71
SUMMARY		365.0	102	9740	1	6580	32500	3000	1e30	11180	635	453	6010	8	608	3000	277	169	5420	2	4690	23160	2140	1300	41750	17
1961	Oct.	31.0	3	15	2	26960	31970	16790	8870	10800	5000	70	282	35	2490	2950	1550	20	79	10	19210	22780	11960	152	610	75
	Nov.	30.0	12	120	4	24770	34630	14230	8010	11850	4120	255	1360	219	2290	3200	1320	73	434	59	17650	24670	10140	562	3350	455
	Dec.	31.0	6	12	4	33180	34310	31800	11370	11750	10780	189	333	125	3070	3170	2940	51	90	34	23640	24450	22660	394	693	263
1962	Jan.	31.0	5	9	2	32390	35010	26400	11050	12130	8640	162	223	56	2990	3240	2440	44	60	16	23080	24950	18810	338	463	122
	Feb.	28.0	4	4	3	35370	36630	33920	12280	12750	11650	116	117	104	3270	3390	3130	31	32	28	25200	26100	24170	238	243	218
	Mar.	31.0	4	5	3	35380	38040	34000	12290	13400	11680	122	124	82	3270	3520	3140	32	33	22	25210	27100	24230	250	256	171
	Apr.	30.0	16	166	2	18030	37100	6380	5470	12970	1580	231	1380	73	1670	3430	590	70	462	19	12850	26430	4550	542	3560	150
	May	31.0	17	274	1	7790	35000	2350	2000	12130	473	90	428	33	720	3230	217	32	170	9	5550	24940	1670	249	1310	69
	June	30.0	555	2300	17	5030	27520	2000	1180	9070	391	1770	11130	274	465	2540	183	696	3660	83	3590	19610	1430	5370	28230	107
	July	31.0	149	1610	2	4000	40000	1570	897	14200	292	359	1760	50	370	3700	145	148	791	14	2850	28500	1120	1140	6110	107
	Aug.	31.0	7	75	2	23180	33000	15000	7390	11270	4380	140	874	58	2140	3050	1390	41	277	16	16520	23510	10690	313	2140	124
	Sept	30.0	130	1250	2	6650	35280	3800	1650	12210	842	579	2830	55	614	3260	351	216	1180	15	4740	25140	2710	1660	9130	119
SUMMARY		365.0	76	2300	1	6440	40000	1570	1590	14200	292	321	11130	33	595	3700	145	120	3660	9	4590	28500	1120	928	28230	69

MONTHLY SUMMARY OF CONTINUOUS RECORDED FLOW AND QUALITY DATA

River Basin: Red

Station Numbers: PHS: 490 USGS: 3050.00

Stream and Location: North Fork of Red River near Headrick, Oklahoma
Lat. 34°38', long. 99°06' in center of N½, Sec. 21, T.2 N., R.18 W at bridge on U. S. Hwy 62, 2½ mi. east of Headrick, Jackson County, Oklahoma, and at river mile 33 above mouth.

Main Stream Flow: 348 cfs Range: 32-862 cfs Years: 27

Equations Used to Compute Concentrations From Specific Conductance

	Number Samples	Equations	Std. Error	Correl. Coeff.
Dissolved Solids:	26	TDS = 0.6590 Sp. C.	197.	0.9942
Chlorides:	163	Log Cl = 1.2890 Log Sp. C.-1.7093	0.0418	0.9910
Sulfates:	163	SO_4 = 0.1206 Sp. C.	143.	0.8201

Remarks: Records poor. Stratification nil. Instantaneous conductivity range 300-12,800 micromhos. The flow recurrence intervals for water years 1961-1962 are 6.00 and 3.60 respectively.

Year	Month	Number of Days of Specific Conductance Record	STREAM FLOW Cubic Feet/Second Mean	Extremes Max. Day	Extremes Min. Day	SPECIFIC CONDUCTANCE Micromhos/Centimeter² @ 25° C Wt. Mean	Extremes Max. Day	Extremes Min. Day	CHLORIDES (Cl) Milligrams/Liter Wt. Mean	Extremes Max. Day	Extremes Min. Day	CHLORIDES (Cl) Tons/Day Wt. Mean	Extremes Max. Day	Extremes Min. Day	SULFATES (SO_4) Milligrams/Liter Wt. Mean	Extremes Max. Day	Extremes Min. Day	SULFATES (SO_4) Tons/Day Wt. Mean	Extremes Max. Day	Extremes Min. Day	DISSOLVED SOLIDS (103° C) Milligrams/Liter Wt. Mean	Extremes Max. Day	Extremes Min. Day	DISSOLVED SOLIDS (103° C) Tons/Day Wt. Mean	Extremes Max. Day	Extremes Min. Day
1960	July	24.0	502	5380	22	2160	10100	1570	411	2820	258	662	3810	147	261	1220	190	421	2800	72	1420	6630	1040	2290	15300	393
	Aug.	30.4	79	647	12	5250	7390	2710	1240	1900	521	260	2610	45	635	894	328	133	1280	22	3460	4870	1790	725	6990	122
	Sept	2.5	45	219	12	6090	6520	5820	1480	1610	1390	220	333	156	737	789	704	110	163	79	4010	4300	3830	598	887	429
SUMMARY		57.4	209	5380	12	2620	10100	1570	535	2820	258	428	3810	45	316	1220	190	253	2800	22	1730	6630	1040	1380	15300	122
1960	Oct.	31.0	2310	19000	12	1520	10600	945	246	3020	134	1530	8220	64	183	1280	114	1140	6730	30	998	6990	623	6220	36600	165
	Nov.	30.0	277	670	136	4900	6990	3450	1120	1760	710	832	1280	510	591	843	416	441	752	271	3230	4610	2270	2410	4110	1480
	Dec.	31.0	414	1160	155	3860	6740	2350	820	1680	432	916	1560	692	467	813	284	520	934	338	2540	4440	1550	2840	5090	1840
1961	Jan.	31.0	325	506	210	4220	6310	3400	919	1550	696	804	1070	583	509	761	411	445	594	319	2780	4160	2240	2430	3240	1740
	Feb.	28.0	377	611	209	3730	7090	2170	785	1800	390	797	1320	279	450	855	262	458	660	185	2460	4670	1430	2500	3600	1010
	Mar.	31.0	332	1140	101	3870	7520	2450	824	1940	457	736	2100	400	466	907	295	418	1220	227	2550	4960	1620	2280	6640	1230
	Apr.	30.0	237	529	80	4180	8160	2510	910	2150	472	581	1060	364	504	984	303	322	589	193	2760	5380	1650	1760	3210	1050
	May	31.0	181	820	61	4080	9350	2230	880	2560	404	430	1290	215	493	1130	270	241	786	122	2690	6160	1470	1310	4280	662
	June	30.0	2030	11000	52	1730	7500	1010	292	1930	146	1600	7420	272	210	905	123	1140	5510	128	1140	4940	666	6250	30000	696
	July	31.0	217	1220	58	3600	6590	1910	751	1630	331	439	1160	204	436	795	231	255	757	105	2380	4340	1260	1390	4120	570
	Aug.	31.0	122	945	48	3740	9640	800	787	2670	108	258	717	115	452	1160	97	148	378	92	2460	6350	527	808	2060	503
	Sept	30.0	249	2790	42	2660	7750	1310	508	2010	204	341	1530	137	321	935	158	215	1190	88	1750	5110	863	1180	6500	481
SUMMARY		365.0	589	19000	12	2490	10600	800	466	3020	108	741	8220	64	300	1280	97	477	6730	30	1640	6990	527	2610	36600	165
1961	Oct.	31.0	259	3070	40	1840	7080	393	314	1790	43	219	870	82	221	854	48	154	696	74	1210	4670	259	843	3790	401
	Nov.	30.0	534	5660	73	1830	6600	885	312	1640	124	449	2000	220	220	796	107	317	1720	116	1200	4350	583	1680	9370	640
	Dec.	31.0	150	182	105	7010	7920	5500	1770	2070	1290	717	1020	473	847	955	663	343	470	230	4620	5220	3620	1870	2560	1250
1962	Jan.	31.0	125	238	51	7280	8980	5990	1860	2430	1440	624	1010	278	878	1080	722	295	495	129	4800	5920	3950	1610	2700	704
	Feb.	28.0	66	99	49	7930	9020	7000	2080	2450	1770	368	517	291	956	1090	844	170	243	132	5230	5940	4610	927	1320	720
	Mar	31.0	49	55	40	8710	9350	7460	2340	2590	1920	306	339	254	1050	1130	900	138	153	114	5740	6160	4910	750	831	622
	Apr.	30.0	279	3930	39	4470	10500	2530	992	2980	477	746	7440	251	541	1270	306	407	4350	112	2950	6920	1670	2220	23700	610
	May	31.0	220	2000	40	3940	11600	1020	841	3390	147	499	1600	177	476	1400	123	283	1140	125	2600	7640	672	1540	6220	678
	June	30.0	2480	10300	151	1650	4060	1000	275	874	144	1840	6650	315	200	490	121	1330	4970	200	1090	2680	659	7280	27100	1090
	July	31.0	194	2090	36	3990	10200	1790	855	2870	304	448	4260	170	482	1230	216	253	2470	86	2630	6720	1180	1380	13500	467
	Aug.	31.0	250	2470	18	3250	10300	1560	657	2910	255	443	5290	108	392	1240	189	266	3030	49	2140	6790	1030	1450	16500	268
	Sept	30.0	517	3890	18	2330	10200	1250	428	2870	193	596	4230	99	282	1230	151	392	2820	47	1540	6720	824	2140	15300	254
SUMMARY		365.0	427	10300	18	2630	11600	393	499	3390	43	570	7440	82	317	1400	48	362	4970	47	1730	7640	259	1980	27100	254

MONTHLY SUMMARY OF CONTINUOUS RECORDED FLOW AND QUALITY DATA

River Basin: Red

Station Numbers: PHS: 753 USGS: 3034.00

Stream and Location: Elm Fork of North Fork of Red River near Carl, Oklahoma
Lat. 35°00'35", long. 99°54'20", NW¼, Sec. 12, T.6 N., R.26 W., at bridge on State Hwy 30, 4 mi. NE of Carl, Harmon County, Oklahoma.

Main Stream Flow: 49 cfs Range: 37-57 cfs Years: 3

Equations Used to Compute Concentrations From Specific Conductance

	Number Samples	Equations	Std. Error	Correl. Coeff.
Dissolved Solids:	26	TDS = 0.6718 Sp. C.	604.	0.9945
Chlorides:	143	Log Cl = 1.2762 Log Sp. C.-1.6867	0.0299	0.994
Sulfates:	65	Log SO_4 = 0.2809 Log Sp. C.+2.0156	0.0447	0.724

Remarks: Records fair. Stratification nil. Instantaneous conductivity range 700-92,000 micromhos. The flow recurrence intervals for water years 1961-1962 are 2.00 and 6.00 respectively.

Year	Month	Number of Days of Specific Conductance Record	STREAM FLOW Cubic Feet/Second Mean	Extremes Max. Day	Extremes Min. Day	SPECIFIC CONDUCTANCE Micromhos/Centimeter² @ 25° C Wt. Mean	Extremes Max. Day	Extremes Min. Day	CHLORIDES (Cl) Milligrams/Liter Wt. Mean	Extremes Max. Day	Extremes Min. Day	CHLORIDES (Cl) Tons/Day Wt. Mean	Extremes Max. Day	Extremes Min. Day	SULFATES (SO_4) Milligrams/Liter Wt. Mean	Extremes Max. Day	Extremes Min. Day	SULFATES (SO_4) Tons/Day Wt. Mean	Extremes Max. Day	Extremes Min. Day	DISSOLVED SOLIDS (103° C) Milligrams/Liter Wt. Mean	Extremes Max. Day	Extremes Min. Day	DISSOLVED SOLIDS (103° C) Tons/Day Wt. Mean	Extremes Max. Day	Extremes Min. Day
1960	July	20.0	50	544	10	13200	50200	5530	4100	20800	1240	673	3180	256	1500	2180	1170	246	1910	57	8880	33700	3720	1460	7980	662
	Aug.	25.7	32	442	10	38600	70000	22500	14900	31300	7360	1360	15000	326	2020	2390	1740	184	2340	56	25900	47100	15100	2370	27400	670
	Sept	27.2	27	189	11	20400	43200	6530	6900	16900	1550	513	4530	238	1690	2080	1230	126	904	54	13700	29000	4390	1020	8360	522
	SUMMARY	73.0	36	544	10	22900	70000	5530	8140	31300	1240	855	15000	238	1750	2390	1170	184	2340	69	15400	47100	3720	1610	27400	522
1960	Oct.	31.0	192	1700	14	4230	33000	1450	873	12020	217	451	2000	50	1080	1930	797	559	4240	182	2840	22170	977	1470	7420	222
	Nov.	30.0	63	74	45	10730	12880	9560	2860	3620	2470	483	619	403	1410	1480	1360	237	276	177	7210	8650	6420	1210	1510	982
	Dec.	31.0	47	63	41	12510	20000	9000	3490	6340	2290	445	925	315	1470	1670	1340	187	244	157	8400	13440	6050	1030	1960	799
1961	Jan.	31.0	38	47	30	15220	39700	9920	4480	15210	2590	455	1300	238	1550	2030	1380	158	174	127	10230	26670	6660	1040	2280	613
	Feb.	28.0	33	42	28	13600	20130	8880	3880	6390	2250	346	633	196	1500	1680	1330	134	166	116	9130	13520	5960	816	1340	521
	Mar.	31.0	46	88	28	9430	15910	1850	2430	4740	304	302	536	72	1360	1570	858	169	266	116	6330	10690	1244	788	1330	297
	Apr.	30.0	52	72	41	11870	20000	8650	3260	6340	2180	456	820	306	1450	1670	1320	202	259	162	7970	13440	5810	1120	1760	817
	May	31.0	31	49	22	15040	18980	10940	4410	5940	2940	366	660	264	1550	1650	1420	128	195	96	10100	12750	7350	838	1430	617
	June	30.0	65	706	15	7790	18390	1870	1900	5700	308	333	1860	99	1280	1640	860	225	2120	66	5230	12360	1260	916	5910	403
	July	31.0	24	291	8	11990	26560	4050	3300	9110	826	216	649	133	1450	1810	1070	95	839	41	8060	17840	2720	527	2130	327
	Aug.	31.0	11	16	9	29000	43730	14450	10190	17220	4190	297	432	176	1860	2090	1530	54	64	47	19490	29380	9710	567	738	408
	Sept	30.0	11	13	9	35640	56890	24330	13260	24080	8140	393	734	240	1970	2250	1770	58	67	50	23940	38220	16340	710	1170	482
	SUMMARY	365.0	51	1700	8	9920	56890	1450	2590	24080	217	358	2000	50	1380	2250	797	190	4240	41	6670	38220	977	920	7420	222
1961	Oct.	31.0	13	17	12	25310	32650	15310	8570	11830	4510	289	416	157	1790	1920	1550	60	84	55	17000	21940	10290	574	816	356
	Nov.	30.0	21	60	16	18140	25760	7460	5600	8760	1800	323	430	222	1630	1800	1270	94	205	74	12180	17300	5010	704	889	518
	Dec.	31.0	16	21	11	19670	30000	13870	6210	10640	3860	274	419	125	1670	1880	1500	74	93	44	13210	20150	9320	583	794	286
1962	Jan.	31.0	19	28	14	20130	40000	9340	6400	15360	2400	320	705	138	1680	2030	1350	84	130	62	13530	26870	6280	677	1230	351
	Feb.	28.0	15	17	12	20430	32000	13580	6520	11560	3870	270	527	146	1680	1910	1500	70	87	57	13730	21500	9120	570	981	344
	Mar.	31.0	15	19	13	22920	33000	17300	7550	12030	5270	305	435	228	1740	1930	1610	70	89	59	15400	22170	11620	622	858	488
	Apr.	30.0	195	4470	13	4220	27070	2250	870	9330	392	457	4710	236	1080	1820	910	568	10940	52	2830	18190	1510	1490	18240	501
	May	31.0	21	60	7	17620	25540	12860	5400	8670	3610	300	825	137	1620	1790	1480	90	241	32	11840	17160	8640	657	1640	287
	June	30.0	125	2640	8	7270	29720	5100	1740	10510	1110	586	7910	141	1260	1870	1140	423	8140	37	4890	19970	3630	1640	24440	299
	July	31.0	42	612	6	10030	46000	2700	2630	18370	493	297	1340	177	1380	2120	960	156	1760	67	6740	30900	1810	762	4440	363
	Aug.	31.0	101	2470	6	4480	35000	2350	939	12960	413	254	2750	66	1100	1960	920	298	6120	30	3010	23510	1580	817	10520	196
	Sept	30.0	105	1610	6	5910	39500	2830	1340	15120	523	379	2430	180	1190	2030	967	337	4260	33	3970	26540	1900	1120	8700	360
	SUMMARY	365.0	57	4470	6	8250	46000	2250	2050	18370	392	315	7910	66	1310	2120	910	201	10940	30	5540	30900	1510	851	24440	196

MONTHLY SUMMARY OF CONTINUOUS RECORDED FLOW AND QUALITY DATA

River Basin: Red

Station Numbers: PHS: 754 USGS: None

Stream and Location: Elm Fork of North Fork of Red River at Salton Crossing, Oklahoma Lat. 35°02', long. 99°56', NE¼ SW¼, Sec. 3, T.6 N., R.26 W., approximately 2½ miles above State Hwy 30 at Salton Crossing, Harmon County, Okla. (USGS Gaging Station No. 3034.00 located approximately 2½ miles downstream from quality station.)

Main Stream Flow: 49 cfs Range: 37-57 cfs Years: 3

Equations Used to Compute Concentrations From Specific Conductance

	Number Samples	Equations	Std. Error	Correl. Coeff.
Dissolved Solids:	27	TDS = 0.7421 Sp. C.	513.	0.9201
Chlorides:	137	Log Cl = 1.5831 Log Sp. C.-2.9227	0.0579	0.9698
Sulfates:	60	Log SO_4 = 0.3986 Log Sp. C.+1.6605	0.0488	0.7720

Remarks: Records poor. Stratification nil. Instantaneous conductivity range 850-30,000 micromhos. The flow recurrence intervals for water years 1961-1962 are 2.00 and 6.00 respectively.

Year	Month	Number of Days of Specific Conductance Record	STREAM FLOW Cubic Feet/Second Mean	Extremes Max. Day	Extremes Min. Day	SPECIFIC CONDUCTANCE Micromhos/Centimeter² @ 25° C Wt. Mean	Extremes Max. Day	Extremes Min. Day	CHLORIDES (Cl) Milligrams/Liter Wt. Mean	Extremes Max. Day	Extremes Min. Day	CHLORIDES (Cl) Tons/Day Wt. Mean	Extremes Max. Day	Extremes Min. Day	SULFATES (SO_4) Milligrams/Liter Wt. Mean	Extremes Max. Day	Extremes Min. Day	SULFATES (SO_4) Tons/Day Wt. Mean	Extremes Max. Day	Extremes Min. Day	DISSOLVED SOLIDS (103° C) Milligrams/Liter Wt. Mean	Extremes Max. Day	Extremes Min. Day	DISSOLVED SOLIDS (103° C) Tons/Day Wt. Mean	Extremes Max. Day	Extremes Min. Day
1960	July	22.8	50	544	10	5990	18000	2320	1350	6730	253	106	213	19	1460	2280	1010	115	367	55	4440	13300	1720	349	885	130
	Aug.	31.0	32	442	10	8700	24800	2360	2610	11700	273	226	1420	61	1710	2590	1020	148	1690	55	6450	18400	1750	559	4920	219
	Sept	19.8	27	189	11	8900	15500	5580	2260	5120	1020	82	169	45	1720	2150	1430	62	90	47	6600	11500	4140	239	379	164
SUMMARY		74.0	36	544	10	7910	24800	2320	2130	11700	253	150	1420	19	1630	2590	1010	114	1690	47	5870	18400	1720	408	4920	130
1960	Oct.	31.0	192	1700	14	2580	7060	1650	301	1480	148	155	779	49	1050	1570	877	541	4160	58	1920	5240	1220	989	6120	190
	Nov.	30.0	62	73	45	4700	5500	4310	776	996	678	128	149	111	1330	1430	1290	220	252	168	3490	4080	3200	575	670	467
	Dec.	31.0	47	63	41	4890	5800	3980	825	1080	597	105	139	87	1350	1460	1250	173	216	149	3630	4300	2950	463	577	390
1961	Jan.	31.0	38	47	30	4980	6220	4390	851	1210	697	87	102	57	1360	1490	1300	139	168	106	3690	4620	3260	376	429	266
	Feb.	28.0	33	42	28	5210	5800	4500	914	1080	726	82	107	68	1390	1460	1310	124	151	103	3870	4300	3340	345	426	297
	Mar.	31.0	46	88	28	4820	6240	3220	808	1220	427	101	169	75	1340	1490	1150	167	273	109	3580	4630	2390	445	726	311
	Apr.	30.0	52	72	41	5170	6110	4400	903	1190	700	126	166	115	1380	1480	1300	193	251	162	3830	4530	3270	536	636	482
	May	31.0	31	49	22	6350	9060	4030	1250	2200	608	104	202	53	1500	1730	1250	124	183	95	4710	6720	2990	391	614	246
	June	30.0	65	706	15	3860	10500	2480	570	2780	283	100	539	64	1230	1840	1030	215	1960	72	2870	7790	1840	502	3500	230
	July	31.0	24	291	8	4990	17100	2500	854	6000	286	56	224	14	1360	2230	1040	89	812	35	3700	12700	1860	242	1510	79
	Aug.	31.0	11	16	9	8670	11100	5070	2050	3030	876	60	76	39	1700	1880	1370	49	57	45	6430	8240	3760	187	206	149
	Sept	30.0	11	13	9	9020	15800	7120	2180	5300	1500	65	122	48	1730	2160	1570	51	58	47	6690	11730	5280	199	278	164
SUMMARY		365.0	51	1700	8	4280	17100	1650	669	6000	148	92	779	14	1280	2230	877	177	4160	35	3170	12700	1220	437	6120	79
1961	Oct.	31.0	13	17	12	7930	11200	6310	1780	3070	1250	60	99	47	1640	1880	1500	55	79	52	5890	8310	4680	199	303	176
	Nov.	30.0	21	60	16	6490	7790	4500	1270	1730	726	73	132	52	1510	1640	1310	87	211	66	4820	5780	3340	278	536	202
	Dec.	31.0	16	21	11	6660	10800	4870	1350	2900	823	59	147	29	1530	1860	1350	67	96	39	4940	8010	3610	217	410	118
1962	Jan.	31.0	19	28	14	5860	10450	3670	1100	2760	526	55	127	25	1450	1830	1220	73	114	55	4350	7750	2720	218	358	122
	Feb.	28.0	15	17	12	7250	12000	6000	1540	3430	1140	64	132	43	1580	1930	1470	66	83	55	5380	8900	4450	223	343	168
	Mar.	31.0	15	19	13	7070	8580	5800	1490	2020	1080	60	85	53	1570	1690	1460	63	83	58	5250	6370	4300	212	290	190
	Apr.	30.0	195	4470	13	2690	7630	1900	322	1670	185	169	2530	57	1070	1620	930	560	11580	56	2000	5660	1410	1050	18370	195
	May	31.0	21	60	7	7890	9800	6880	1760	2490	1420	98	231	41	1640	1780	1560	91	252	32	5850	7270	5110	325	830	126
	June	30.0	125	2640	8	3280	10200	2270	439	2650	247	147	1740	38	1150	1810	1000	387	7090	36	2630	7570	1680	817	11980	126
	July	31.0	42	612	6	4630	22000	2130	760	8950	222	86	366	69	1320	2460	970	150	1600	34	3440	16330	1580	388	2600	188
	Aug.	31.0	101	2470	6	2520	17500	1630	290	6230	146	79	969	25	1040	2250	875	281	5830	36	1870	12990	1210	506	8050	122
	Sept	30.0	105	1610	6	2660	17000	1890	315	5950	185	89	804	40	1080	2220	925	300	4010	37	1970	12620	1400	559	6080	157
SUMMARY		365.0	57	4470	6	3640	22000	1630	520	8950	146	80	2530	25	1200	2460	875	185	11580	32	2700	16330	1210	415	18370	118

MONTHLY SUMMARY OF CONTINUOUS RECORDED FLOW AND QUALITY DATA

River Basin: Red Sta. No. Numbers: PHS: 483 USGS: 3015.00

Stream and Location: North Fork of Red River near Carter, Oklahoma
Lat. 35°10', long. 99°30', NW¼ SE¼, Sec. 15, T.8 N., R.22 W., at bridge on State Hwy 34, 3 mi. south of Carter, Beckham County, Okla. and at river mi. 110.5 above mouth.

Main Stream Flow: 136 cfs Range: 22-293 cfs Years: 17

Remarks: Records poor. Stratification nil. Instantaneous conductivity range 140-3000 micromhos. The flow recurrence interval for water year 1961 is 11.30.

Equations Used to Compute Concentrations From Specific Conductance

	Number Samples		Equations	Std. Error	Correl. Coeff.
Dissolved Solids:	26	TDS	= 0.7460 Sp. C.	153	0.9295
Chlorides:	74	Log Cl	= 1.21316 Log Sp. C.-1.63798	38	0.8715
Sulfates:	74	Log SO_4	= 1.19053 Log Sp. C.-1.15330	67	0.9216

Year	Month	Number of Days of Specific Conductance Record	STREAM FLOW Cubic Feet/Second Mean	Extremes Max. Day	Extremes Min. Day	SPECIFIC CONDUCTANCE Micromhos/Centimeter² @ 25° C Wt. Mean	Extremes Max. Day	Extremes Min. Day	CHLORIDES (Cl) Milligrams/Liter Wt. Mean	Extremes Max. Day	Extremes Min. Day	Tons/Day Wt. Mean	Extremes Max. Day	Extremes Min. Day	SULFATES (SO_4) Milligrams/Liter Wt. Mean	Extremes Max. Day	Extremes Min. Day	Tons/Day Wt. Mean	Extremes Max. Day	Extremes Min. Day	DISSOLVED SOLIDS (103° C) Milligrams/Liter Wt. Mean	Extremes Max. Day	Extremes Min. Day	Tons/Day Wt. Mean	Extremes Max. Day	Extremes Min. Day
1960	July	18.7	418	5580	8	686	1750	153	84	216	19	138	971	1	214	547	48	350	2460	1	512	1310	114	836	5890	2
	Aug.	29.4	109	835	11	1230	2600	845	151	320	104	45	281	9	383	811	264	115	713	24	915	1960	731	275	1710	56
	Sept.	30.0	89	647	1	1090	2910	739	135	359	91	32	159	1	341	909	231	82	402	1	816	2170	552	195	962	3
SUMMARY		78.0	205	5580	1	848	2910	153	104	359	19	62	971	1	266	909	48	159	2460	1	633	2170	114	379	5890	2
1960	Oct.	31.0	610	4380	17	1080	2680	600	110	333	54	181	818	15	288	842	143	473	2160	39	808	2000	448	1330	6430	94
	Nov.	30.0	171	191	144	2300	2650	1410	273	329	153	126	160	76	704	832	394	325	405	196	1710	1980	1050	790	961	523
	Dec.	31.0	176	270	119	2680	2700	2600	329	337	321	156	245	108	847	845	815	402	615	271	2000	2010	1940	948	1470	645
1961	Jan.	31.0	205	258	169	2590	2870	2300	316	363	277	175	211	149	815	932	702	450	532	379	1930	2140	1720	1070	1250	904
	Feb.	28.0	196	347	98	2230	2700	1650	263	337	186	139	287	72	678	845	473	357	728	182	1660	2010	1230	875	1740	461
	Mar.	31.0	197	743	111	2490	2750	1720	301	345	194	160	615	94	776	868	497	412	1560	237	1860	2050	1280	985	3740	572
	Apr.	30.0	113	302	39	2350	2630	1530	280	325	168	85	258	29	723	822	435	220	660	74	1750	1960	1140	534	1570	177
	May	31.0	181	,950	8	1220	2440	774	126	298	73	61	384	6	329	757	192	160	1010	16	911	1820	578	443	3030	39
	June	30.0	1140	7140	40	1250	2350	750	131	286	71	402	2700	31	341	722	186	1050	6860	79	932	1760	559	2860	17150	188
	July	31.0	128	360	29	1660	2330	1065	184	281	106	63	186	21	479	711	275	165	474	55	1240	1740	780	426	1180	134
SUMMARY		304.0	312	7140	8	1660	2870	600	182	363	54	153	2700	6	471	932	143	395	6860	16	1220	2140	448	1023	17150	39

MONTHLY SUMMARY OF CONTINUOUS RECORDED FLOW AND QUALITY DATA

River Basin: Red

Station Numbers: PMS: 481 USGS: 3005.00

Stream and Location: Salt Fork of Red River at Mangum, Oklahoma
Lat. 34°52', long. 99°31', SW¼SE¼, Sec. 34, T.5 N., R.22 W., at bridge on State Hwy 34, ½ mi. south of Mangum, Greer County, Okla., and at river mile 35.5 above mouth.

Equations Used to Compute Concentrations From Specific Conductance

	Number Samples	Equations		Std. Error	Correl. Coeff.
Dissolved Solids:	25	TDS	= 0.8379 Sp. C.	289.	0.8884
Chlorides:	142	Log Cl	= 1.1249 Log Sp. C.-1.5430	0.0604	0.9126
Sulfates:	142	Log SO_4	= 1.2162 Log Sp. C.-1.1111	0.05618	0.9331

Main Stream Flow: 97 cfs Range: 12-277 cfs Years: 25

Remarks: Records poor. Occasional minor stratification.
Instantaneous conductivity range 220-5150 micromhos.
The flow recurrence intervals for water years 1961-1962 are 7.14 and 1.72 respectively.

Year	Month	Number of Days of Specific Conductance Record	STREAM FLOW Cubic Feet/Second Mean	Extremes Max. Day	Extremes Min. Day	SPECIFIC CONDUCTANCE Micromhos/Centimeter² @ 25° C Wt. Mean	Extremes Max. Day	Extremes Min. Day	CHLORIDES (Cl) Milligrams/Liter Wt. Mean	Extremes Max. Day	Extremes Min. Day	CHLORIDES (Cl) Tons/Day Wt. Mean	Extremes Max. Day	Extremes Min. Day	SULFATES (SO_4) Milligrams/Liter Wt. Mean	Extremes Max. Day	Extremes Min. Day	SULFATES (SO_4) Tons/Day Wt. Mean	Extremes Max. Day	Extremes Min. Day	DISSOLVED SOLIDS (103° C) Milligrams/Liter Wt. Mean	Extremes Max. Day	Extremes Min. Day	DISSOLVED SOLIDS (103° C) Tons/Day Wt. Mean	Extremes Max. Day	Extremes Min. Day
1960	July	31.0	47	571	0	1830	2450	1080	143	191	84	18	233	1	802	1070	471	102	1310	1	1530	2050	901	195	2500	1
	Aug.	30.5	64	601	0	1140	2030	979	89	158	76	16	130	3	499	889	429	90	730	16	955	1700	821	172	1400	31
	Sept.	11.8	51	373	3	1740	2150	589	136	168	46	27	106	1	764	943	258	154	595	4	1460	1800	494	294	1140	8
	SUMMARY	73.0	54	601	0	1790	2450	589	138	191	46	22	233	1	783	1070	258	125	1310	1	1500	2050	494	240	2500	1
1960	Oct.	31.0	927	8720	12	946	2900	800	64	225	54	160	1340	7	322	1250	260	804	6660	33	793	2430	670	1980	16770	80
	Nov.	30.0	496	123	75	2480	2730	1870	189	218	137	49	660	301	1040	1170	740	268	365	162	2080	2290	1560	535	2170	1580
	Dec.	31.0	118	523	49	2040	2890	1277	153	226	47	48	179	21	820	1250	465	261	956	113	1710	2430	1069	543	3260	140
1961	Jan.	31.0	76	199	30	2320	2620	2020	175	201	150	36	93	16	960	1110	803	196	509	88	1940	2200	1690	398	1180	138
	Feb.	28.0	178	443	64	2420	2630	1910	184	202	142	88	224	26	1010	1120	755	485	1240	142	2020	2210	1600	973	2630	300
	Mar.	31.0	129	1440	30	2380	3080	2050	180	240	153	62	664	17	990	1350	820	344	3650	92	2000	2580	1720	693	10010	139
	Apr.	30.0	49	457	3	3080	4250	2550	240	343	182	32	239	2	1350	2000	1070	179	1320	11	2580	3560	2130	341	4380	17
	May	31.0	17	255	0	2790	3060	--	215	239	--	10	148	0	1200	1340	--	53	823	0	2330	2570	--	104	1740	0
	June	30.0	272	4090	0	1920	2620	--	141	201	--	103	2300	0	761	1110	--	556	12680	0	1610	2200	--	1180	24250	0
	July	31.0	151	1110	1	1470	2750	817	105	215	55	43	385	1	551	1170	267	224	2070	2	1230	2300	684	502	6930	1
	Aug.	31.0	8	59	0	1720	2000	--	125	148	--	3	18	0	668	800	--	14	98	0	1440	1675	--	30	268	0
	Sept	30.0	2	42	0	1600	2000	--	115	148	--	1	7	0	612	800	--	4	37	0	1340	1675	--	8	101	0
	SUMMARY	365.0	168	8720	0	1570	4250	--	113	343	--	51	2300	0	599	2000	--	273	12680	0	1320	3560	--	601	24250	0
1961	Oct.	31.0	0	0	0	--	--	--	--	--	--	0	0	0	--	--	--	0	0	0	--	--	--	0	0	0
	Nov.	30.0	42	357	1	2170	2790	1760	163	218	130	18	130	1	887	1200	685	100	715	3	1820	2340	1470	205	1760	6
	Dec.	31.0	42	237	14	2470	2980	2200	188	233	166	21	116	8	1040	1310	895	117	639	45	2070	2500	1840	234	1600	75
1962	Jan.	31.0	100	717	14	2290	3480	1980	172	271	147	46	302	8	945	1570	795	255	1640	40	1920	2920	1660	518	5640	63
	Feb.	28.0	33	59	8	2690	3240	2380	207	253	181	18	30	1	1150	1420	985	101	161	2	2250	2720	2000	199	423	4
	Mar.	31.0	13	40	0	3190	3710	--	249	295	--	9	27	0	1410	1700	--	51	156	0	2670	3110	--	97	332	0
	Apr.	30.0	160	3710	0	1890	4460	--	139	360	--	60	1270	0	745	2120	--	322	6770	0	1580	3740	--	682	37400	0
	May	31.0	31	304	0	2160	3580	--	161	285	--	13	86	0	879	1630	--	73	454	0	1810	3000	--	151	2460	0
	June	30.0	135	939	19	1830	3000	1300	134	234	92	49	363	9	718	1310	475	260	1950	46	1540	2510	1090	557	6370	54
	July	31.0	59	673	0	1610	2690	--	116	210	--	18	236	0	616	1140	--	97	1290	0	1350	2250	--	213	4090	0
	Aug.	31.0	172	3790	0	1330	3030	--	93	237	--	43	900	0	486	1330	--	225	4650	0	1110	2560	--	514	25970	0
	Sept	30.0	173	3110	0	1050	3000	--	72	234	--	34	478	0	365	1310	--	170	2380	0	879	2540	--	410	21090	0
	SUMMARY	365.0	80	3790	0	1740	4460	--	127	360	--	27	1270	0	678	2120	--	145	6770	0	1460	3740	--	314	37400	0

MONTHLY SUMMARY OF CONTINUOUS RECORDED FLOW AND QUALITY DATA

River Basin: Red

Station Numbers: PHS: 703 USGS: 1000.00

Stream and Location: Salt Fork of Red River near Wellington, Texas
Lat. 34°57'25", long. 100°13'30" on bridge of Hwy. 83, 6½ mi. north of Wellington, Collingsworth County, Texas, and at river mile 86.8 above mouth.

Main Stream Flow: 93 cfs Range: 46-160 cfs Years: 8

Equations Used to Compute Concentrations From Specific Conductance

	Number Samples	Equations	Std. Error	Correl. Coeff.
Dissolved Solids:	26	TDS = 0.8495 Sp. C.	196	0.9459
Chlorides:	73	Cl = 0.0889 Sp. C.	35	0.7671
Sulfates:	73	SO_4 = 0.4113 Sp. C.	161	0.8839

Remarks: Records poor. Occasional minor stratification.
Instantaneous conductivity range 230-6400 micromhos.
The flow recurrence interval for water year 1961 is 3.20.

Year	Month	Number of Days of Specific Conductance Record	STREAM FLOW Cubic Feet/Second Mean	Extremes Max. Day	Extremes Min. Day	SPECIFIC CONDUCTANCE Micromhos/Centimeter² @ 25° C Wt. Mean	Extremes Max. Day	Extremes Min. Day	CHLORIDES (Cl) Milligrams/Liter Wt. Mean	Extremes Max. Day	Extremes Min. Day	Tons/Day Wt. Mean	Extremes Max. Day	Extremes Min. Day	SULFATES (SO_4) Milligrams/Liter Wt. Mean	Extremes Max. Day	Extremes Min. Day	Tons/Day Wt. Mean	Extremes Max. Day	Extremes Min. Day	DISSOLVED SOLIDS (103° C) Milligrams/Liter Wt. Mean	Extremes Max. Day	Extremes Min. Day	Tons/Day Wt. Mean	Extremes Max. Day	Extremes Min. Day
1960	July	0.0	82	950	2	--	--	--	--	--	--	0	0	0	--	--	--	0	0	0	--	--	--	0	0	0
	Aug.	15.0	37	359	3	3060	3150	3000	272	281	267	3	4	2	1260	1300	1230	14	18	9	2600	2680	2550	28	38	19
	Sept	17.4	69	702	4	1600	3390	769	142	302	69	22	130	5	656	1390	316	103	602	25	1360	2880	654	213	1250	52
SUMMARY		32.0	63	950	2	1640	3390	769	143	302	69	13	130	2	683	1390	316	62	602	9	1400	2880	654	127	1250	19
1960	Oct.	31.0	520	3420	13	1260	3260	550	112	290	49	157	654	9	519	1340	226	728	3030	43	1070	2770	467	1510	6260	89
	Nov.	30.0	54	223	26	2470	2810	2210	220	250	196	32	139	16	1020	1160	909	147	642	76	2100	2390	1880	304	1330	156
	Dec.	31.0	52	242	1	2370	2940	2160	210	261	192	30	130	1	974	1210	888	137	604	4	2010	2500	1830	283	1250	8
1961	Jan.	31.0	37	136	10	2730	4180	2215	243	372	197	24	72	9	1120	1720	911	113	334	44	2320	3550	1880	233	690	90
	Feb.	28.0	86	161	34	2340	2700	1700	208	240	151	48	83	21	960	1110	699	222	384	99	1980	2290	1440	459	793	205
	Mar.	31.0	57	209	21	2160	3000	1430	192	267	127	29	89	13	888	1230	588	135	410	61	1830	2550	1210	279	847	125
	Apr.	30.0	29	111	6	2040	2800	562	181	249	50	14	38	4	837	1150	231	66	173	17	1730	2380	477	136	359	36
	May	31.0	9	40	1	2420	3200	2000	215	284	178	5	19	1	994	1320	823	25	89	3	2050	2720	1700	52	184	7
	June	30.0	271	3720	4	1160	2950	966	101	262	86	74	802	3	467	1210	397	341	3710	12	964	2510	821	704	7670	25
	July	31.0	153	1720	4	1080	3400	800	96	302	71	40	329	2	442	1400	329	182	1530	11	913	2890	680	377	3150	22
SUMMARY		304.0	127	3720	1	1440	4180	550	128	372	49	44	802	1	594	1720	226	204	3710	3	1230	3550	467	421	7670	7

MONTHLY SUMMARY OF CONTINUOUS RECORDED FLOW AND QUALITY DATA

River Basin: Red

Station Numbers: FMS: 750 USGS: 2995.70

Stream and Location: Red River near Quanah, Texas
Lat. 34°24'45", long. 99°44'00", on bridge of State Hwy 283, 8 mi. north of Quanah, Hardeman County, Texas, and at river mile 1030.

Main Stream Flow: 235 cfs Range: 189-282 cfs Years: 2

Equations Used to Compute Concentrations From Specific Conductance

	Number Samples	Equations	Std. Error	Correl. Coeff.
Dissolved Solids:	27	TDS = 0.6867 Sp. C.	622.	0.9889
Chlorides:	142	Log Cl = 1.1833 Log Sp. C.-1.2978	0.0291	0.9901
Sulfates:	124	Log SO_4 = 0.7086 Log Sp. C.+0.2751	0.0496	0.9290

Remarks: Records poor. Stratification nil. Instantaneous conductivity range 1450-42,000 micromhos. The flow recurrence intervals for water years 1961-1962 are 4.00 and 1.33 respectively.

Year	Month	Number of Days of Specific Conductance Record	STREAM FLOW Cubic Feet/Second Mean	Extremes Max. Day	Extremes Min. Day	SPECIFIC CONDUCTANCE Micromhos/Centimeter² @ 25° C Wt. Mean	Extremes Max. Day	Extremes Min. Day	CHLORIDES (Cl) Milligrams/Liter Wt. Mean	Extremes Max. Day	Extremes Min. Day	Tons/Day Wt. Mean	Extremes Max. Day	Extremes Min. Day	SULFATES (SO_4) Milligrams/Liter Wt. Mean	Extremes Max. Day	Extremes Min. Day	Tons/Day Wt. Mean	Extremes Max. Day	Extremes Min. Day	DISSOLVED SOLIDS (103° C) Milligrams/Liter Wt. Mean	Extremes Max. Day	Extremes Min. Day	Tons/Day Wt. Mean	Extremes Max. Day	Extremes Min. Day
1960	July	18.5	669	6500	8	7990	17000	6390	2100	5090	1600	1250	5750	105	1080	1870	920	637	3320	38	5500	11700	4400	3260	15800	241
	Aug.	16.9	134	698	2	8880	17200	3290	2370	5160	729	1120	4850	33	1180	1880	580	598	2150	12	6120	11900	2270	2890	12400	75
	Sept	19.5	57	247	4	13400	25300	6810	3900	8170	1730	578	3270	74	1570	2460	970	232	1210	26	9210	17600	4700	1370	7570	168
	SUMMARY	55.0	287	6500	2	9010	25300	3290	2440	8170	729	970	5750	33	1180	2460	580	470	3320	12	6210	17400	2270	2480	15800	75
1960	Oct.	31.0	1840	21070	3	5420	18000	4340	1320	5460	1010	6530	57700	24	834	1950	710	4130	40510	11	3730	12400	2990	18460	169900	61
	Nov.	30.0	61	157	38	22630	24000	19790	7160	7660	6110	1180	2530	775	2300	2390	2090	378	875	242	15590	16530	13630	2570	5730	1670
	Dec.	31.0	213	659	35	19670	26000	16000	6070	8450	4750	3480	9400	750	2080	2530	1800	1190	3410	229	13550	17910	11020	7770	21450	1600
1961	Jan.	31.0	75	219	27	23300	26000	18000	7420	8450	5460	1500	3280	588	2340	2530	1950	475	1110	180	16050	17910	12400	3260	7480	1260
	Feb.	28.0	100	134	61	24100	25000	23000	7720	8060	7300	2090	3070	1250	2400	2460	2320	649	975	390	16600	17220	15840	4490	6650	2690
	Mar.	31.0	134	829	4	16970	25000	10000	5100	8060	2730	1840	6110	85	1870	2460	1290	676	2880	27	11680	17220	6890	4220	15430	186
	Apr.	30.0	33	116	4	22010	25000	17610	6930	8060	5320	622	2190	65	2250	2460	1920	202	697	22	15160	17220	12120	1360	4750	145
	May	31.0	117	2200	1	14040	28000	9530	4070	9220	2580	1280	27040	10	1660	2670	1240	514	10380	4	9670	19280	6560	3040	63090	23
	June	30.0	167	1520	2	12370	27000	10000	3510	8830	2730	1580	14010	28	1500	2600	1290	676	6060	11	8520	18600	6890	3840	34230	65
	July	31.0	584	4470	1	5200	19000	3000	1260	5830	656	1980	17350	5	809	2030	550	1270	8850	2	3580	13080	2070	5630	45190	11
	Aug.	31.0	15	133	1	14370	20500	10500	4190	6320	2887	169	1160	18	1660	2140	1330	67	511	6	9890	14120	7230	400	2850	40
	Sept	30.0	10	55	1	18400	25250	14000	5610	8150	4080	148	859	16	1980	2480	1630	52	293	6	12670	17390	9640	335	1910	37
	SUMMARY	365.0	279	21070	1	8800	28000	3000	2340	9220	656	1780	57700	5	1180	2670	550	895	40510	2	6060	19280	2070	4610	169900	11
1961	Oct.	31.0	8	55	2	21020	32000	14100	6560	10800	4090	139	163	27	2180	2940	1640	46	440	11	14670	22040	9710	306	3310	64
	Nov.	30.0	85	505	19	20820	38000	10000	6490	13320	2730	1490	3707	406	2160	3310	1290	498	1750	123	14340	26170	6890	3300	9370	862
	Dec.	31.0	37	71	19	28410	35000	25230	9380	12000	8140	934	1860	407	2700	3130	2480	269	522	125	19560	24100	17380	1950	3810	887
1962	Jan.	31.0	34	82	11	26300	30290	20200	8560	10010	6270	785	1380	79	2550	2820	2120	236	465	77	18110	20860	13920	1660	3060	540
	Feb.	28.0	16	36	7	27050	29500	25920	8850	9800	8410	387	875	170	2600	2770	2530	114	259	49	18630	20320	17850	815	1850	354
	Mar.	31.0	8	17	1	25880	30900	18350	8400	10350	5590	184	518	22	2520	2860	1980	55	143	8	17820	21270	12640	391	1060	151
	Apr.	30.0	114	1580	1	12850	29380	9500	3670	13800	2570	1130	11640	17	1560	3400	1240	473	5500	6	8850	27120	6540	2730	29410	38
	May	31.0	16	91	2	18650	29750	11180	5700	9900	3110	217	1290	22	2000	2790	1390	76	384	8	12840	20490	7700	490	2730	56
	June	30.0	1090	13360	26	7250	30900	4000	1860	10350	922	5490	33250	683	1020	2860	670	3020	24240	189	4990	21280	2750	14720	99340	1400
	July	31.0	453	4150	2	10020	31760	5680	2730	10700	1400	3340	27560	33	1290	2920	860	1570	13550	12	6900	21870	3910	8430	70720	75
	Aug.	31.0	251	3370	1	7670	22620	7010	1990	7060	1790	1350	17080	13	1070	2280	1000	721	9360	6	5290	15440	4830	3570	45520	31
	Sept	30.0	146	1040	1	9320	24500	4770	2510	7870	1130	986	6060	20	1220	2430	760	681	7660	7	6420	16870	3290	2520	22400	45
	SUMMARY	365.0	188	13360	1	9760	39380	4000	2650	13800	922	1340	33250	13	1270	3400	670	641	24240	6	6720	27120	2750	3410	99360	31

MONTHLY SUMMARY OF CONTINUOUS RECORDED FLOW AND QUALITY DATA

River Basin: Red

Station Numbers: PHS: 478 USGS: 2985.00

Stream and Location: Prairie Dog Town Fork of Red River near Brice, Texas
Lat. 34°37'40", long. 100°56'25", on State Hwy 70,
6 mi. SW of Brice, Hall County, Texas, and at river
mile 1110.

Main Stream Flow: 85 cfs Range: 19-171 cfs Years: 17

Equations Used to Compute Concentrations From Specific Conductance

	Number Samples	Equations	Std. Error	Correl. Coeff.
Dissolved Solids:	19	TDS = 0.7106 Sp. C.	889,	0.9967
Chlorides:	107	Log Cl = 1.2610 Log Sp. C.-1.5485	0.0359	0.9963
Sulfates:	99	Log SO_4 = 0.4880 Log Sp. C.+1.1787	0.1317	0.7822

Remarks: Records fair. Stratification nil. Instantaneous conductivity range 100-70,000 micromhos. The flow recurrence intervals for water years 1961-1962 are 2.80 and 1.27 respectively.

Year	Month	Number of Days of Specific Conductance Record	STREAM FLOW Cubic Feet/Second Mean	Extremes Max. Day	Extremes Min. Day	SPECIFIC CONDUCTANCE Micromhos/Centimeter² @ 25° C Wt. Mean	Extremes Max. Day	Extremes Min. Day
1960	July	0	1060	16700	0	--	--	--
	Aug.	19.1	131	1570	0	7380	12400	2900
	Sept	0	32	219	0	--	--	--
SUMMARY		19.0	409	16700	0	7380	12400	2900
1960	Oct.	31.0	547	5260	0	3000	16000	--
	Nov.	30.0	12	25	3	19450	28900	14800
	Dec.	31.0	22	114	3	19560	27800	12000
1961	Jan.	31.0	8	34	2	25950	38000	23900
	Feb.	28.0	8	55	1	23820	34000	20000
	Mar.	31.0	11	65	0	20660	36000	--
	Apr.	30.0	2	22	0	26130	39500	--
	May	31.0	9	214	0	6420	25000	--
	June	30.0	93	1250	0	4810	15000	--
	July	31.0	268	3160	0	2770	40000	--
	Aug.	31.0	18	248	0	7580	35000	--
	Sept	30.0	30	345	0	6500	25000	--
SUMMARY		365.0	86	5260	0	4390	40000	--
1961	Oct.	31.0	7	183	0	8120	20000	--
	Nov.	30.0	19	216	0	15350	60000	--
	Dec.	31.0	0.1	0.3	0	60280	65000	--
1962	Jan.	31.0	3	48	0	22390	63900	--
	Feb.	28.0	0.2	1	0	34610	50000	--
	Mar.	31.0	0	0	0	--	--	--
	Apr.	30.0	4	83	0	3240	12000	--
	May	31.0	3	52	0	14570	69100	--
	June	30.0	285	2370	0	4610	16200	--
	July	31.0	271	1680	1	4360	25500	3000
	Aug.	31.0	73	1370	0	2980	15000	--
	Sept	30.0	0.2	3	0	11630	25000	--
SUMMARY		365.0	55	2370	0	4800	69100	--

Year	Month	CHLORIDES (Cl) Milligrams/Liter Wt. Mean	Extremes Max. Day	Extremes Min. Day	Tons/Day Wt. Mean	Extremes Max. Day	Extremes Min. Day	SULFATES (SO_4) Milligrams/Liter Wt. Mean	Extremes Max. Day	Extremes Min. Day	Tons/Day Wt. Mean	Extremes Max. Day	Extremes Min. Day	DISSOLVED SOLIDS (103° C) Milligrams/Liter Wt. Mean	Extremes Max. Day	Extremes Min. Day	Tons/Day Wt. Mean	Extremes Max. Day	Extremes Min. Day
1960	July	--	--	--	0	0	0	--	--	--	0	0	0	--	--	--	0	0	0
	Aug.	1820	3420	562	352	3670	1	1170	1510	740	226	2010	1	5250	8830	2060	1010	10200	3
	Sept	--	--	--	0	0	0	--	--	--	0	0	0	--	--	--	0	0	0
SUMMARY		1820	3420	562	352	3670	1	1170	1510	740	226	2010	1	5250	8830	2060	1010	10200	3
1960	Oct.	584	4670	--	861	6120	0	751	1700	--	1110	9460	0	2130	11400	--	3140	23700	0
	Nov.	5940	9720	4240	191	313	66	1870	2270	1640	60	109	16	13820	20500	10500	443	729	142
	Dec.	5990	9260	3260	360	1150	69	1870	2230	1480	113	456	17	13900	19800	8530	835	2950	148
1961	Jan.	8500	13700	7680	178	783	52	2150	2590	2150	45	199	12	18440	27000	17000	387	1710	110
	Feb.	7640	11900	6150	160	1080	15	2060	2460	1900	43	297	4	16920	24200	14200	354	2410	33
	Mar.	6410	12800	--	197	1360	0	1930	2520	--	59	366	0	14680	25600	--	451	3010	0
	Apr.	8570	14300	--	46	415	0	2160	2640	--	12	120	0	18570	28100	--	100	940	0
	May	1500	8120	--	36	636	0	1090	2110	--	26	555	0	4360	17800	--	109	2050	0
	June	1050	4310	--	263	2130	0	945	1650	--	237	2610	0	3420	10700	--	858	7660	0
	July	528	14500	--	382	3590	0	722	2660	--	522	5590	0	1970	28400	--	1420	13900	0
	Aug.	1850	12300	--	91	737	0	1180	2490	--	58	643	0	5390	24900	--	264	2380	0
	Sept	1520	8120	--	125	1030	0	1090	2110	--	90	894	0	4620	17800	--	378	3310	0
SUMMARY		937	14500	--	220	6120	0	904	2660	--	212	9460	0	3120	28400	--	731	23700	0
1961	Oct.	2010	6150	--	38	1000	0	1220	1900	--	23	606	0	5770	14200	--	110	2880	0
	Nov.	4430	24100	--	232	2520	0	1670	3240	--	87	964	0	10910	42600	--	571	6220	0
	Dec.	24200	26600	--	3	19	0	3250	3370	--	0	3	0	42830	46200	--	6	34	0
1962	Jan.	7080	26000	--	57	655	0	2000	3340	--	16	227	0	15910	45400	--	128	1570	0
	Feb.	12200	19200	--	5	34	0	2480	2960	--	1	7	0	24590	35500	--	11	70	0
	Mar.	--	--	--	0	0	0	--	--	--	0	0	0	--	--	--	0	0	0
	Apr.	643	3260	--	6	158	0	780	1480	--	7	181	0	2300	8500	--	22	555	0
	May	4150	28700	--	32	708	0	1620	3470	--	13	246	0	10350	49100	--	81	1690	0
	June	996	4740	--	764	4660	0	926	1710	--	711	5200	0	3280	11500	--	2510	16300	0
	July	930	8320	584	679	5050	6	902	2130	751	659	3830	3	3100	18100	2130	2270	15600	16
	Aug.	579	4310	--	114	1720	0	748	1650	--	147	2530	0	2120	10700	--	417	6550	0
	Sept	3140	8120	--	2	19	0	1450	2110	--	1	9	0	8260	17800	--	5	50	0
SUMMARY		1050	28700	--	157	5050	0	944	3470	--	142	5200	0	3410	49100	--	511	15600	0

DAILY FLOW AND CONTINUOUS RECORDED QUALITY DATA

DAILY FLOW AND CONTINUOUS RECORDED QUALITY DATA

PHS Station No.: 403
Location: Arkansas River at Van Buren, Arkansas
Water Year: 1961

Basin: Arkansas River
Tributary to: --
Remarks: Records good. Occasional minor stratification.

Equations Used to Compute Constituents--
Chlorides: Cl =0.2685 - 52
Sulfates: SO_4=0.0950 Sp. C.
Dissolved Solids: DS =0.6394 Sp. C.

Discharge (cfs) and Specific Conductance, Micromhos/cm (µmhos)

Day	October		November		December		January		February		March		April		May		June		July		August		September	
	cfs	µmhos	cfs	µmhos	cfs	µmhos	cfs	µmhos	cfs	µmhos	cfs	µmhos	cfs	µmhos	cfs	µmhos	cfs	µmhos	cfs	µmhos	cfs	µmhos	cfs	µmhos
1	7800	1211	35850	984	6595	1796	12900	1110	5499	1176	26788	810	109750	441	27675	750	130125	270	16388	1127	44150	375	17713	1112
2	10467	1208	42075	1204	6543	1271	12900	1110	5808	1233	24700	850	104300	582	25875	793	116750	286	18788	883	37300	392	16450	1387
3	10175	1598	42625	810	7525	1421	14375	1060	5734	1586	22813	900	89925	493	29500	769	99188	307	18475	764	31500	421	14975	1328
4	8075	1671	41825	644	7229	1251	15500	1040	5710	1387	19925	940	71388	503	44763	632	77063	322	17075	770	27450	506	13213	1178
5	7770	1464	43725	723	5626	1104	15275	1050	5710	1671	18350	980	56200	524	119142	522	68913	349	14650	770	21958	592	11750	1065
6	7590	1169	39800	681	5513	1166	13425	1100	5734	1843	21475	920	50638	541	190688	310	69025	469	11950	883	17958	743	37481	828
7	7560	1071	34975	569	7823	1339	11700	1155	5925	1989	26900	790	48200	531	138647	330	68763	530	12700	1066	14850	833	64075	451
8	7560	1208	31200	532	11463	1460	10365	1200	6373	1788	35623	713	47000	600	155000	357	72650	613	12225	1028	12600	971	62825	428
9	6608	1171	27625	528	15525	988	8608	1280	7296	1734	34927	597	44825	757	223167	431	70050	430	12762	908	13233	1032	55475	497
10	5500	929	23925	577	20363	880	8050	1300	8053	1462	29325	656	42525	670	272125	375	70363	538	21150	904	12750	892	47175	491
11	4815	1130	18025	646	31725	648	9205	1180	8775	1343	26800	874	40238	647	280750	364	62875	615	24300	1030	12463	856	39050	533
12	5230	1252	15300	767	39675	441	9420	1160	9015	1300	23675	779	40850	680	262167	375	61375	580	21400	881	11688	790	34225	663
13	5976	1598	13200	809	42725	670	9383	1165	8598	1296	20900	710	44463	736	233250	360	55950	600	18288	729	11133	754	36925	641
14	5325	1620	10813	798	45275	569	9158	1180	8270	1330	18375	864	50738	806	218875	326	42950	616	18838	707	8925	763	43300	595
15	5053	1295	11300	974	41050	546	10260	1160	7805	1300	16125	918	54038	848	213625	303	39200	851	43713	486	10226	693	109175	615
16	5353	1465	13588	990	35075	553	9740	1150	7425	1295	14504	844	52513	775	212625	305	64350	868	117900	341	53687	604	173417	554
17	6872	1515	12875	860	31125	562	10105	1150	7692	1495	12363	873	47938	787	210125	313	75550	741	140500	297	85862	380	148250	390
18	6840	1456	10088	868	31050	529	10663	1200	9000	1250	12025	967	42775	806	205875	320	56238	615	118250	236	87400	364	125375	336
19	7135	1391	10613	1176	31275	602	10438	1250	11593	1170	13225	1095	38775	745	189125	305	38888	559	113875	256	81450	350	128375	298
20	8605	1571	10225	1181	28425	691	9520	1300	15588	1040	14313	1070	36100	725	171875	300	35625	616	109250	266	54738	397	128125	261
21	18400	1265	7746	1112	27175	795	8770	1350	19913	945	16425	1010	34125	732	159875	315	34375	948	92625	268	36538	409	121125	250
22	22588	1231	6624	1169	23750	794	8173	1400	21988	905	19973	940	31875	777	147000	335	29050	1122	66900	263	27275	424	108500	254
23	20138	1009	7764	1550	20900	800	6701	1500	23600	870	22825	880	30975	858	131250	379	23838	908	52319	303	21025	497	98000	270
24	22800	1212	7920	1426	16900	816	6490	1600	25750	820	26950	790	35400	913	134625	418	20300	811	83475	482	17450	607	88313	292
25	25300	1343	7750	1266	14338	967	7316	1650	31950	690	31475	750	36375	786	144375	462	17090	745	104550	418	24300	848	80375	356
26	23175	1149	5961	1255	12713	1075	7740	1650	34800	650	42175	672	31875	753	148250	406	13963	794	96550	382	34725	923	71563	437
27	18900	954	6665	1218	12200	1265	7830	1271	33450	680	51213	789	27450	795	136375	339	12800	932	88450	526	32100	993	61750	428
28	16975	885	5901	1696	12763	1350	7950	1148	30900	700	52475	784	25596	835	131000	291	13500	1160	82688	415	31350	1190	63000	395
29	13575	921	4991	1336	14600	1060	7005	1023			51413	799	29475	897	132625	288	13300	1117	74000	362	30900	1176	71000	392
30	15625	984	6409	1602	14213	1075	6038	1021			62813	770	31025	784	132875	308	13400	1075	63038	355	24200	980	73250	435
31	21500	975			13075	1120	4426	1192			109806	526			132125	298			52375	360	20000	843		
Avg	11432	1200	18573	851	20459	781	9620	1205	13498	1020	29699	777	47578	672	159847	358	52240	556	56111	413	30683	599	71454	437

DAILY FLOW AND CONTINUOUS RECORDED QUALITY DATA

PMS Station No.: 403
Location: Arkansas River at Van Buren, Arkansas
Water Year: 1962

Basin: Arkansas
Tributary to: --
Remarks: Records good. Occasional minor stratification.

Equations Used to Compute Constituents--
Chlorides: Cl =0.2685 - 52
Sulfates: SO4=0.0950 Sp. C.
Dissolved Solids: DS =0.6394 Sp. C.

Discharge (cfs) and Specific Conductance, Micromhos/cm (µmhos)

Day	October		November		December		January		February		March		April		May		June		July		August		September	
	cfs	µmhos	cfs	µmhos	cfs	µmhos	cfs	µmhos	cfs	µmhos	cfs	µmhos	cfs	µmhos	cfs	µmhos	cfs	µmhos	cfs	µmhos	cfs	µmhos	cfs	µmhos
1	69375	387	18325	859	48100	611	27600	827	43150	835	31950	660	44950	475	30650	615	4935	1534	12163	1160	16838	602	6374	816
2	62875	504	21825	678	44113	606	26100	973	45913	720	30075	600	41250	520	29775	710	12763	1716	11475	1306	15013	578	7295	907
3	65625	355	35900	646	43388	598	26325	1045	49800	897	28875	540	36875	555	27750	583	21400	1174	13525	1533	15388	600	6739	945
4	61713	372	62000	542	43788	597	26400	1009	50100	747	27975	565	30750	521	25925	688	33400	870	14838	2150	15625	647	5520	931
5	54975	358	134625	701	46713	566	26550	1024	48000	734	25900	620	25675	521	21475	734	46850	775	14825	2012	16000	835	7743	997
6	49138	361	156750	458	44450	533	26225	922	45525	750	24600	680	23800	573	17138	816	44625	661	12800	1689	21200	1423	15638	798
7	45113	203	133200	353	41950	632	29600	839	42713	750	25188	665	23125	600	13913	891	47925	547	13200	1842	26925	1638	15438	660
8	38625	463	108500	320	41725	650	28275	772	40525	755	22638	740	20200	668	12300	1067	69025	540	13200	1604	25925	1474	15013	656
9	32275	498	88650	308	52300	528	27600	792	38663	800	20438	830	19075	775	12100	1124	79800	487	13013	1146	22000	1530	14225	698
10	29100	531	73188	329	61688	681	26788	860	37075	837	19200	815	17800	856	12100	1035	74025	751	10300	957	17775	1615	12025	686
11	28575	536	58775	367	58438	513	24713	825	36525	850	17813	880	17725	906	11750	1015	98300	746	13238	1083	14750	1202	23925	783
12	26825	560	48100	448	60875	559	22713	775	30750	859	15763	960	25475	950	10030	1001	117667	1024	19013	1150	13263	1115	33900	605
13	62238	625	43975	587	61613	600	21913	680	27825	920	15013	1035	40750	782	8718	1100	97175	820	26700	1207	9875	1226	30763	550
14	102225	667	44513	648	53325	619	22567	555	26475	960	14438	960	42613	652	6891	1159	75663	685	28650	870	8575	1389	25025	561
15	100350	655	45825	635	47513	616	28050	535	25875	1050	12925	950	38788	712	6269	1325	57600	604	25388	672	10860	1552	21263	502
16	90000	626	42850	638	45500	616	27900	538	25800	1220	11638	1120	32125	670	6889	1480	47013	580	22625	654	11413	1211	20325	481
17	77125	388	48950	645	36525	591	22767	523	23875	1360	11750	1170	26925	700	7479	1754	41200	619	21163	651	10663	1060	44638	475
18	61650	383	44175	658	65925	566	21688	768	26325	1310	11625	1210	22688	763	7505	1672	35975	657	21425	646	9665	1162	62825	402
19	50625	382	74238	641	76433	550	22625	834	26250	1170	10675	1325	22713	1009	7123	1353	30975	780	18675	601	8178	1076	66750	362
20	46950	401	76500	566	77900	512	22688	939	25500	1000	10875	1400	24625	792	6679	1257	28063	890	15750	625	6108	1092	52325	407
21	41150	416	77188	616	62713	685	20125	906	26475	875	16738	1070	23175	633	5275	1250	25000	1156	17225	718	5270	1133	39725	435
22	37100	424	96963	655	56850	519	27400	724	28775	800	31900	720	18900	673	4585	1450	23875	1250	19225	798	6660	1306	47350	502
23	32275	465	115750	327	53713	534	31575	612	31213	710	43200	710	26875	714	5098	1377	24288	1249	17450	779	7041	1267	48913	436
24	30375	424	116875	314	50225	572	29025	660	36988	672	41900	600	70100	505	5620	1571	22163	1086	15363	772	6884	1003	44075	400
25	27000	507	114625	327	45650	600	27675	535	37438	680	42700	473	78463	479	5376	1627	17463	1041	20100	526	6665	950	44113	400
26	22913	553	102613	358	41500	576	27375	512	34663	685	59800	550	63588	450	5159	1308	14775	1163	27675	469	5616	989	65200	675
27	21675	655	81675	370	39125	572	30150	574	34275	655	71050	495	52575	611	4820	1237	17975	1277	28225	443	4256	854	44300	1205
28	20600	679	65175	428	36550	585	33375	710	34350	610	65588	511	42500	452	4383	1205	15325	1100	24350	465	3629	1166	34250	1078
29	18688	676	56775	497	33675	650	34125	810			54638	576	32100	560	4220	1446	14538	1134	20888	548	4900	1221	41150	810
30	15775	690	51163	582	30600	731	35250	820			44925	571	30075	589	4360	1625	12613	1120	18438	641	5900	1378	38050	773
31	14063	789			29025	835	34988	857			44350	533			4480	1459			17963	655	5983	993		
Avg	42885	472	75162	471	49835	578	27318	767	35014	847	49227	672	33871	605	10826	999	41848	808	18354	902	11562	1166	30829	601

DAILY FLOW AND CONTINUOUS RECORDED QUALITY DATA

PHS Station No.: 302
Location: Canadian River near Whitefield, Oklahoma
Water Year: 1961

Basin: Arkansas River
Tributary to: Arkansas River
Remarks: Records good. Occasional minor stratification.

Equations Used to Compute Constituents--
Chlorides: Log Cl =1.1929 Log Sp.C.-1.2512
Sulfates: SO_4=0.0826 Sp. C.
Dissolved Solids: DS =0.5953 Sp. C.

Discharge (cfs) and Specific Conductance, Micromhos/cm (μmhos)

Day	October		November		December		January		February		March		April		May		June		July		August		September	
	cfs	μmhos	cfs	μmhos	cfs	μmhos	cfs	μmhos	cfs	μmhos	cfs	μmhos	cfs	μmhos	cfs	μmhos	cfs	μmhos	cfs	μmhos	cfs	μmhos	cfs	μmhos
1	2548	1480	6559	780	662	1370	4556	878	905	1780	2233	950	30750	400	1048	1445	3363	615	1315	1005	4265	500	791	1325
2	1740	1520	4813	851	638	1370	6850	813	899	1635	2114	950	20158	410	955	1541	2655	624	1115	905	3065	512	940	1265
3	1288	1530	3446	852	630	1378	5728	851	910	1653	2234	1085	14067	450	969	1426	2021	697	1083	827	1987	634	770	1040
4	1048	1580	2783	767	644	1428	3944	890	923	1627	1940	1100	10019	620	2100	1045	1744	791	1398	966	1546	748	645	1099
5	900	1545	2390	807	769	1382	2878	954	945	1649	1873	1059	8314	805	36351	351	2087	726	1176	928	1310	852	739	1028
6	831	1560	2084	820	1012	1182	2318	1087	944	1643	2622	883	6538	912	40246	441	3296	633	920	1014	1225	917	701	1179
7	754	1513	1853	820	2099	850	1973	1146	1021	1615	4575	693	6140	990	17917	366	3135	532	773	1085	973	1029	2028	1667
8	930	1471	1743	840	3461	610	1731	1190	1208	1539	6286	771	5233	1057	14338	365	4059	900	2697	1080	809	1109	4232	1426
9	738	1375	1856	893	3883	610	1613	1205	1610	1226	5293	901	5033	1087	18438	444	10093	872	7175	810	733	1020	1495	1170
10	579	1331	1945	895	5312	544	1489	1223	2078	1200	3828	966	4765	1072	13579	485	8350	853	3679	830	670	1022	1185	1100
11	467	1356	1764	889	13338	381	1398	1232	2372	1060	2547	989	5509	1136	9339	529	6286	852	3420	842	617	1045	1043	1133
12	443	1387	1336	850	16096	495	1341	1297	2655	920	2041	1022	5875	1125	6626	648	4433	933	3043	625	687	1078	918	1300
13	421	1415	1255	925	10495	463	1311	1342	2099	1080	1691	1075	5975	1038	4554	707	4619	1042	3018	486	707	1182	1774	800
14	406	1432	1218	1003	6815	487	1503	1340	1693	1240	1498	1107	5431	969	3805	780	4584	1070	3535	407	671	1242	20695	580
15	379	1587	969	1027	4525	596	3275	865	1750	1124	1363	1140	4330	933	3515	800	4330	1031	27934	413	1141	1110	26654	535
16	1655	1452	860	1110	3606	687	2611	844	2585	1387	1265	1182	3620	935	3205	806	8334	912	32381	300	1092	840	14246	550
17	1451	1208	812	1185	2850	731	1954	896	3450	1509	1214	1208	3204	955	3047	820	7150	838	15904	320	1415	869	10269	600
18	1478	1047	762	1205	2264	888	1660	1032	3744	1407	1278	1195	2964	1044	3099	833	6585	703	11904	338	6982	950	7854	530
19	3153	934	734	1270	2608	994	1481	1163	5268	896	1380	1162	2590	1095	6374	985	6753	708	10313	390	5166	1140	5685	550
20	8994	869	732	1300	2689	1030	1351	1258	4659	970	1578	1056	2300	1106	6380	875	5640	694	9703	461	2917	968	4629	561
21	9057	837	779	1300	2305	1054	1193	1359	4701	1133	2218	948	2065	1150	4005	975	4284	668	6594	547	2020	782	4219	559
22	5082	924	794	1308	2115	1095	1155	1477	3906	1138	2440	1013	1860	1175	6566	742	3733	640	4177	681	1519	706	4031	518
23	8341	972	793	1330	1945	1132	1135	1551	3790	846	2665	856	1693	1194	12233	702	3450	630	20497	795	1293	700	4000	500
24	11130	1200	777	1330	1723	1170	1076	1569	3325	812	2519	836	1596	1200	8777	691	3165	628	25892	487	1702	746	3988	500
25	5968	1246	761	1340	1568	1195	1093	1568	3098	890	3945	1116	1498	1267	6411	625	2578	615	15479	458	1667	850	3871	510
26	5770	1148	758	1365	1480	1220	963	1442	2883	930	7569	1018	1394	1307	8446	510	1925	709	9575	450	1315	909	3102	586
27	7514	895	749	1350	1404	1238	820	1431	2615	975	12813	666	1311	1353	7365	474	1796	861	7450	443	1548	944	3327	851
28	4460	845	732	1357	1374	1292	860	1475	2404	958	11979	634	1241	1398	4905	451	2253	1173	6499	447	1620	991	7469	595
29	4482	975	714	1380	1374	1320	846	1441			8668	653	1179	1400	4056	536	2013	1260	5700	440	1345	1136	6019	625
30	8371	703	694	1375	1413	1320	721	1567			33616	450	1111	1405	3925	617	1660	1244	5258	450	1056	1243	4574	675
31	9898	604			2330	1217	764	1737			48127	415			3701	630			4858	495	932	1258		
Avg.	3557	1007	1582	953	3336	711	1987	1079	2444	1136	5981	673	5595	776	8589	547	4212	816	8208	488	1742	889	5063	646

DAILY FLOW AND CONTINUOUS RECORDED QUALITY DATA

PHS Station No.: 392
Location: Canadian River near Whitefield, Oklahoma
Water Year: 1962

Basin: Arkansas River
Tributary to: Arkansas River
Remarks: Records good. Occasional minor stratification.

Equations Used to Compute Constituents--
Chlorides: Log Cl = 1.1929 Log Sp.C.-1.2512
Sulfates: SO_4=0.0826 Sp. C.
Dissolved Solids: DS =0.5953 Sp. C.

Discharge (cfs) and Specific Conductance, Micromhos/cm (μmhos)

Day	October		November		December		January		February		March		April		May		June		July		August		September	
	cfs	μmhos	cfs	μmhos	cfs	μmhos	cfs	μmhos	cfs	μmhos	cfs	μmhos	cfs	μmhos	cfs	μmhos	cfs	μmhos	cfs	μmhos	cfs	μmhos	cfs	μmhos
1	4423	696	824	1099	3830	817	2103	1159	2949	1080	3034	870	10644	332	7806	780	4272	800	3593	1010	1451	607	2258	479
2	5734	714	2641	990	3249	886	1919	1350	3118	1067	2731	930	7987	323	6125	700	4043	624	3377	1100	1042	774	629	552
3	9964	589	4758	653	2990	962	1861	1381	2763	1188	2614	1050	4837	410	4979	685	11339	468	2750	1150	826	901	481	983
4	8871	493	9887	663	2935	1025	1825	1431	3078	1273	3113	1070	3256	502	3845	685	11777	388	2378	1011	1066	922	1056	919
5	5483	497	8263	700	3245	1070	1860	1470	2731	1328	4244	1120	2769	512	3245	760	10561	557	2113	996	11936	1252	2378	614
6	3193	696	5585	903	5701	711	2389	1223	2148	1380	4400	1280	2637	606	2845	870	8191	582	1845	945	7850	1117	2294	790
7	2260	685	4263	982	6390	530	1945	1253	1818	1360	3455	1129	3315	686	2450	965	8939	441	1535	994	5972	1434	3033	790
8	1751	721	3233	865	5695	518	1905	1351	1628	1380	2724	1054	3647	657	2123	1000	9604	539	1313	1022	4251	1550	3260	646
9	1395	875	2793	833	11728	470	1790	1418	1471	1440	2245	1114	2889	713	1798	1012	8636	543	1178	1058	3119	1535	4181	703
10	1303	1003	2693	865	12900	400	1613	1447	1365	1460	1955	1133	2444	798	1533	1062	11563	506	1145	1140	2060	1550	6038	616
11	6917	551	2680	860	10644	419	1500	1422	1365	1500	1799	1123	2190	707	1330	1126	34031	424	1270	1180	1323	1554	4906	592
12	9122	566	2837	775	8044	47[illegible]	1400	1294	1388	1600	1664	1165	2035	700	1179	1200	21444	407	2364	1023	958	1556	3705	588
13	9193	683	2386	716	5498	618	1338	1381	1330	1582	1499	1206	2877	734	1088	1237	15167	437	4096	632	703	1561	2209	565
14	5580	727	2174	875	4550	816	1500	1369	1445	1410	1380	1250	4235	774	1039	1394	11138	500	4628	405	576	1600	1504	688
15	4268	860	2036	877	3670	908	1710	1403	1403	1400	1271	1306	4234	734	908	1475	8915	346	4970	350	478	1576	1675	634
16	3285	1000	2800	941	4206	828	1880	1443	1414	1390	1169	1356	3814	707	791	1500	8215	200	4652	362	417	1557	4206	478
17	2484	919	5238	952	9564	655	2088	1397	1391	1390	1065	1394	3773	856	729	1490	7615	268	2290	471	362	1519	6521	456
18	2393	832	5540	884	12675	798	2336	1366	1375	1420	988	1412	7032	543	669	1520	7615	447	1255	624	324	1500	7607	573
19	2120	777	4685	867	10398	711	2683	1335	1385	1450	931	1450	7513	381	615	1525	8528	483	956	764	296	1500	5958	413
20	1888	823	4003	1002	8264	600	2565	1443	1375	1408	1703	994	6379	581	576	1515	9194	508	761	824	273	1507	5285	400
21	1593	881	3375	921	6758	590	2328	1329	1600	1322	14552	615	4459	674	524	1579	9919	546	688	875	251	1505	5436	507
22	1375	900	15157	372	5629	598	4566	819	1640	1261	14708	675	3807	697	499	1617	9223	566	627	920	227	1515	5038	635
23	1210	948	36033	416	5035	709	7053	475	1990	1132	10018	760	42273	242	483	1631	7068	575	675	973	203	1513	6005	695
24	1124	980	26925	407	4600	780	5817	372	3677	882	8075	860	40300	308	457	1650	3770	689	3426	640	230	1502	3806	571
25	1066	980	22963	370	4213	780	4453	494	5867	613	14216	600	27733	233	507	1650	4639	929	15977	248	223	1466	3210	509
26	1093	1011	19738	370	3700	811	4213	670	5927	540	18213	415	20717	278	864	1648	6135	700	13673	219	190	1505	3396	558
27	1101	954	12943	372	3559	925	4839	698	4616	700	13950	460	12485	236	1123	1406	4523	680	7371	307	170	1580	3625	691
28	1126	912	6326	473	3336	1053	5206	712	3813	850	9529	520	9088	383	978	1288	4977	1000	5511	396	162	1649	2682	703
29	1000	1062	4887	627	2785	1130	4856	849			7518	530	9313	229	1016	1326	3800	1010	4033	396	161	1713	1855	711
30	913	1100	4365	745	2498	1160	4121	1054			6720	525	9541	420	1253	1682	3400	970	3850	415	158	1750	1448	782
31	911	1096			2903	1130	3453	1100			8473	480			4023	1189			2215	582	477	1210		
Avg.	3359	707	7734	564	5845	686	2875	997	2360	1094	5473	719	8941	381	1852	1010	9274	491	3436	536	1540	1315	3523	590

DAILY FLOW AND CONTINUOUS RECORDED QUALITY DATA

PHS Station No.: 761
Location: North Canadian River near Eufaula, Oklahoma
Water Year: 1961

Basin: Arkansas River
Tributary to: Canadian River
Remarks: Records good. Frequent minor stratification.

Equations Used to Compute Constituents--
Chlorides: Log Cl =1.2314 Log Sp.C.-1.3383
Sulfates: SO_4=0.0401 Sp. C. + 10
Dissolved Solids: DS =0.5931 Sp. C.

Discharge (cfs) and Specific Conductance, Micromhos/cm (μmhos)

Day	October		November		December		January		February		March		April		May		June		July		August		September	
	cfs	μmhos	cfs	μmhos	cfs	μmhos	cfs	μmhos	cfs	μmhos	cfs	μmhos	cfs	μmhos	cfs	μmhos	cfs	μmhos	cfs	μmhos	cfs	μmhos	cfs	μmhos
1	194	1800	2274	1094	327	1092	795	1252	331	1660	1063	976	7827	206	469	1775	2375	533	651	868	3375	379	370	1210
2	175	1800	2014	969	317	1144	1035	1261	351	1542	967	960	5515	410	433	1700	1510	647	569	815	1925	468	358	1230
3	159	1757	1695	812	317	1229	1223	1586	373	1530	894	1012	4958	553	357	1621	1039	804	553	948	1155	625	338	1250
4	167	1929	1458	824	326	1192	943	1621	376	1549	804	1107	3601	663	866	1378	955	925	522	1038	919	759	330	1270
5	196	1946	1223	848	372	1175	794	1471	352	1642	820	1012	2758	742	11426	582	1278	877	445	1010	844	900	348	1301
6	197	1753	1021	822	462	1165	694	1375	339	1650	935	947	2451	750	11150	615	1596	747	405	1014	744	1110	568	1638
7	183	1759	949	810	714	1289	627	1400	369	1611	1301	968	2271	800	4843	541	1341	874	378	1135	613	1136	713	2173
8	195	1893	895	833	1096	1489	585	1403	404	1633	1736	1062	1968	800	5665	702	1213	896	4027	900	556	1025	55	1584
9	194	1787	834	961	950	1202	559	1403	433	1550	1618	1172	1878	830	7754	565	1203	913	3519	650	519	1043	378	1321
10	181	1454	744	1000	1482	900	526	1402	436	1525	1151	1120	2014	930	6493	464	1698	1031	3104	775	483	1095	491	1417
11	171	1504	666	1000	2436	743	512	1403	447	1550	874	1300	2649	950	5280	440	2028	985	3079	584	476	1110	459	1501
12	168	1782	594	1000	2585	714	503	1408	463	1600	687	1242	3180	960	3870	490	1824	1070	3029	395	460	1169	401	1511
13	162	1795	545	1010	1941	728	497	1395	477	1600	572	1162	3276	826	3000	573	1748	971	3199	260	444	1203	525	1282
14	152	1640	500	1035	1736	764	912	933	464	1600	514	1245	2946	739	2709	655	1815	892	3813	287	457	1273	7407	686
15	145	1590	479	1077	1494	826	1053	717	456	1791	502	1287	2340	836	2550	680	2031	815	15319	450	469	1157	6312	675
16	136	1667	481	1099	1261	805	657	836	458	1670	501	1273	1954	828	2376	693	3327	832	13593	308	511	1115	7463	420
17	126	1705	432	1122	1053	963	514	910	470	1600	491	1250	1764	844	2049	754	4276	689	9075	259	962	894	6343	480
18	179	1660	399	1210	937	963	448	1122	1457	1100	538	1207	1673	854	1660	878	4249	528	8579	265	2666	1239	4753	476
19	284	1568	390	1217	926	853	407	1260	1602	1050	566	1198	1535	861	1461	959	4471	512	7975	302	2344	900	3499	477
20	474	1578	437	1165	936	859	385	1392	1631	1175	663	1200	1310	1013	1385	1210	3919	485	6794	327	1300	718	3195	523
21	619	2310	459	1074	872	970	366	1520	1660	1200	814	1200	1134	932	1191	1351	3521	483	4169	412	869	621	3251	500
22	712	1753	435	1095	815	1055	366	1628	1588	990	908	1192	997	950	4052	952	3254	482	2520	521	676	600	3409	455
23	1363	1504	396	1102	765	1077	367	1650	1426	907	939	1198	909	1020	4901	685	3080	480	13946	553	591	602	3510	473
24	1015	1354	373	1015	713	1085	352	1650	1306	1112	906	1296	837	1120	2975	711	2615	499	10300	415	560	652	3566	493
25	813	1345	372	995	649	1100	313	1730	1290	1054	874	1333	762	1250	3084	751	1655	590	6713	384	563	740	3018	463
26	694	1163	370	1060	606	1100	302	1531	1278	983	1360	1256	667	1525	3051	646	1163	692	5678	305	553	835	2033	599
27	750	1109	374	1100	582	1103	301	1540	1186	895	3317	635	608	1750	2826	518	1754	1151	5135	285	524	874	1421	729
28	896	1292	379	1175	564	1110	304	1584	1079	935	2543	961	570	1700	2833	520	1535	1113	4875	270	483	1004	2148	596
29	759	1383	361	1200	558	1141	311	1577			2172	1227	531	1700	2798	554	1138	1111	4740	285	443	1130	1505	754
30	1800	662	344	1200	544	1236	321	1843			6598	454	500	1720	2841	548	829	937	4620	332	413	1170	1670	790
31	1661	1038			687	1302	324	1822			11104	176			2833	525			4385	340	389	1200		
Avg.	481	1375	730	983	936	958	558	1351	804	1219	1572	789	2179	748	3522	648	2148	715	5023	395	880	825	2328	587

DAILY FLOW AND CONTINUOUS RECORDED QUALITY DATA

PHS Station No.: 761
Location: North Canadian River near Eufaula, Oklahoma
Water Year: 1962

Basin: Arkansas River
Tributary to: Canadian River
Remarks: Records good. Frequent minor stratification.

Equations Used to Compute Constituents--
Chlorides: Log Cl =1.2314 Log Sp.C.-1.3383
Sulfates: SO_4=0.0401 Sp. C. + 10
Dissolved Solids: DS =0.5931 Sp. C.

Discharge (cfs) and Specific Conductance, Micromhos/cm (μmhos)

Day	October		November		December		January		February		March		April		May		June		July		August		September	
	cfs	μmhos	cfs	μmhos	cfs	μmhos	cfs	μmhos	cfs	μmhos	cfs	μmhos	cfs	μmhos	cfs	μmhos	cfs	μmhos	cfs	μmhos	cfs	μmhos	cfs	μmhos
1	1823	862	1524	1000	2078	794	1061	1300	873	1600	820	1550	1869	807	3175	887	1380	1492	2114	968	723	685	303	872
2	2296	867	1903	971	1906	880	981	1343	794	1576	915	1527	1525	912	2690	869	1370	1435	1570	1163	628	817	199	1289
3	1738	916	3261	645	1751	974	948	1407	739	1520	1381	1347	1250	995	2109	792	1363	1070	1400	1038	598	850	294	1246
4	1540	717	2918	596	1566	1010	915	1471	713	1526	2493	1216	1104	1020	1863	758	3613	888	1208	1001	511	927	796	739
5	1414	984	2188	894	1226	1063	882	1499	701	1535	2418	1143	1000	1089	1734	836	4225	721	1118	913	446	1043	1371	660
6	1301	910	2590	1218	1424	1090	854	1468	644	1582	1946	1122	906	1174	1523	990	3220	652	1019	1002	392	1050	2014	528
7	1213	1007	2075	1017	1401	1159	846	1446	635	1609	1499	1149	850	1212	1313	1031	3256	556	920	1050	355	1060	2063	576
8	1200	1082	1670	921	1491	1193	820	1464	632	1675	1178	1273	804	1312	1122	1055	3144	568	854	1087	325	1139	1176	545
9	1200	1090	1604	885	2255	1000	794	1474	619	1700	990	1292	781	1394	954	1092	3791	558	824	1100	301	1234	2773	540
10	1508	795	1728	837	2333	1168	777	1414	660	1726	883	1272	770	1400	822	1142	5930	658	875	1142	273	1258	3823	600
11	1721	590	1819	795	2549	1118	691	1636	729	1817	795	1300	756	1323	714	1224	12138	620	1141	1008	246	1250	2898	674
12	2130	1266	1661	783	2444	820	632	1561	791	1793	733	1307	1142	1384	644	1352	7893	452	2631	715	228	1262	1800	600
13	1655	1064	1473	859	2324	924	623	1604	843	1574	665	1371	2532	1151	625	1477	7551	555	3161	412	209	1346	1093	663
14	1563	1187	1295	824	2405	1206	656	1700	846	1500	622	1408	3075	909	555	1550	6629	580	3331	390	192	1363	891	636
15	1790	1318	1124	862	1921	1227	817	1476	824	1490	567	1439	2869	712	477	1570	5554	505	3205	379	180	1283	1920	423
16	1389	952	2594	881	2364	1064	973	1205	817	1485	524	1525	2651	744	421	1600	5126	490	2213	421	167	1287	4245	462
17	1210	825	3508	940	6283	954	1086	1197	807	1520	497	1575	2475	816	382	1610	5080	470	1068	561	152	1340	5356	440
18	1200	774	3005	775	7521	888	1203	1375	866	1560	485	1608	2590	790	346	1625	5373	453	803	649	141	1371	5654	380
19	1280	857	2613	903	6213	636	1142	1571	874	1629	471	1644	3069	962	320	1650	6063	453	709	749	129	1412	5530	340
20	1141	916	2155	974	5669	547	970	1624	828	1650	1191	1043	2865	936	306	1700	6281	563	628	847	119	1500	4718	350
21	976	930	1887	855	4931	549	923	1681	820	1655	2978	959	2073	894	281	1750	6171	588	593	913	109	1500	2988	410
22	862	930	6272	468	4100	692	944	1569	820	1630	4159	1008	1650	876	265	1781	5743	625	573	943	99	1510	2541	460
23	761	923	10898	397	3600	856	948	1440	1002	1607	3533	1100	14873	410	258	1794	3636	701	637	1285	92	1555	2263	500
24	684	931	7373	447	3434	766	957	1477	1041	1637	3363	996	14672	363	245	1806	1943	904	1596	526	89	1617	1916	550
25	649	979	6384	374	3178	774	1034	1514	994	1645	5827	600	9225	481	326	2021	2889	816	3925	587	88	1677	1651	590
26	851	918	5519	412	2653	858	1213	1600	1006	1660	6355	600	7323	494	475	1482	1895	664	4345	534	85	1765	1355	630
27	894	914	4063	497	2131	940	1450	1432	941	1689	5308	593	5431	523	389	1362	1673	1082	3795	500	85	1813	1089	670
28	741	978	3058	747	1814	1025	1499	1416	828	1594	4709	653	3405	669	318	1722	1470	1129	2568	436	85	1800	885	700
29	590	850	2500	742	1618	1117	1386	1477			4084	572	3006	804	308	2259	1326	1085	1529	502	81	1800	720	740
30	514	1000	2163	715	1485	1192	1236	1568			3116	576	3424	967	449	1990	1583	1062	1434	817	73	1800	627	770
31	498	1031			1355	1273	1083	1589			2363	691			997	2229			931	600	613	460		
Avg.	1237	952	3094	666	2820	887	979	1476	810	1613	2157	905	3332	673	852	1174	4244	634	1701	668	252	1079	2165	508

DAILY FLOW AND CONTINUOUS RECORDED QUALITY DATA

PHS Station No.: 390
Location: Deep Fork River near Beggs, Oklahoma
Water Year: 1961

Basin: Arkansas River
Tributary to: North Canadian River
Remarks: Records very good. Occasional minor stratification.

Equations Used to Compute Constituents--
Chlorides: Cl =0.2205 Sp. C.
Sulfates: SO_4=0.0200 Sp. C. + 17
Dissolved Solids: DS =0.5794 Sp. C.

Discharge (cfs) and Specific Conductance, Micromhos/cm (μmhos)

Day	October		November		December		January		February		March		April		May		June		July		August		September	
	cfs	μmhos	cfs	μmhos	cfs	μmhos	cfs	μmhos	cfs	μmhos	cfs	μmhos	cfs	μmhos	cfs	μmhos	cfs	μmhos	cfs	μmhos	cfs	μmhos	cfs	μmhos
1	48	1320	183	714	76	920	143	880	73	1236	288	750	1750	570	109	1183	593	452	174	750	608	407	116	777
2	63	1313	177	718	73	920	205	880	77	1250	268	761	1177	499	103	1260	422	468	167	774	413	469	114	823
3	58	1354	168	720	83	921	159	880	77	1270	249	788	779	491	101	1271	644	633	156	799	310	512	95	903
4	55	1350	163	720	89	1226	133	899	74	1335	217	832	924	694	104	1282	1199	555	142	842	250	546	91	870
5	53	1481	163	720	106	1421	120	949	73	1358	196	852	1035	691	463	1129	774	594	132	877	214	576	93	1122
6	52	1526	166	720	186	1397	111	1010	73	1378	317	1187	926	663	1380	618	522	600	120	902	237	598	135	1198
7	50	1354	166	720	348	1232	108	1025	76	1390	349	947	747	678	2697	349	406	634	297	1206	206	637	137	1241
8	48	1279	161	774	152	675	107	1003	82	1390	263	851	609	692	3038	313	600	617	1617	573	211	649	101	1038
9	47	1269	148	820	97	639	106	1003	90	1413	204	982	767	793	2371	416	1040	638	1894	370	222	622	79	1071
10	45	1250	137	810	100	526	104	1000	99	1420	164	1030	1139	668	1823	525	962	551	1928	180	205	650	72	1194
11	41	1260	124	791	388	922	102	1000	102	1385	144	986	908	641	1565	575	842	520	2243	196	187	675	79	1105
12	37	1274	115	775	621	654	100	1000	101	1298	130	950	778	562	1605	527	902	543	2518	228	170	688	94	1032
13	33	1269	105	771	412	752	98	1000	100	1256	120	987	767	616	1688	500	860	567	2655	251	163	807	354	907
14	31	1277	94	766	241	911	105	1011	100	1275	113	1082	635	693	1651	492	1376	523	2729	308	147	688	1903	602
15	29	1276	88	791	188	800	103	1037	99	1338	107	1140	508	701	1113	521	2785	317	2950	420	229	629	1995	365
16	28	1265	88	800	268	717	100	1095	98	1263	102	1150	546	866	706	590	2951	297	2943	332	1187	425	1800	299
17	27	1275	168	1573	361	786	99	1168	99	1240	101	1140	506	837	510	583	2775	302	2790	300	724	512	1705	345
18	33	1228	181	1103	359	746	95	1173	152	1553	108	1157	391	850	395	583	2483	318	2265	355	503	591	1823	325
19	37	1206	138	968	323	665	92	1150	709	1186	127	1300	319	866	317	617	2400	310	1702	400	176	627	2186	303
20	84	1378	103	890	282	647	88	1150	559	775	134	1401	274	858	274	540	2404	334	1465	401	162	764	2568	273
21	95	2017	95	890	246	640	86	1150	299	558	145	1351	249	880	240	656	2419	360	1205	418	185	792	2803	275
22	80	1597	104	858	217	642	84	1150	338	698	162	1322	229	927	449	949	2135	398	1965	395	238	848	2838	301
23	58	1406	112	597	198	650	82	1150	506	837	152	1338	207	967	1563	534	1167	452	2981	290	271	828	2163	342
24	156	1339	112	750	179	655	79	1150	533	804	134	1249	190	995	1672	352	679	493	3139	217	272	828	1041	369
25	331	1071	109	842	167	677	79	1150	484	741	122	1183	178	1022	1588	384	475	527	3305	198	259	750	656	403
26	333	851	103	895	157	700	79	1170	418	710	121	1200	162	1068	1734	418	364	564	3528	199	231	725	495	446
27	296	725	96	900	147	717	74	1197	367	700	249	1232	147	1072	1846	408	297	624	3648	246	201	725	413	485
28	261	700	89	930	139	767	63	1200	326	723	305	1204	134	1090	1959	400	248	647	3614	294	178	725	858	532
29	231	700	84	930	133	825	64	1205			257	1128	124	1107	2058	400	213	672	3290	312	157	710	783	624
30	202	700	80	920	126	844	61	1205			513	995	115	1125	1733	420	189	717	2507	334	142	719	483	582
31	189	708			128	865	69	1200			1635	654			925	447			1174	381	133	747		
Avg.	101	1045	127	840	213	799	100	1045	221	952	242	963	574	697	1218	473	1171	423	1976	313	277	605	936	398

DAILY FLOW AND CONTINUOUS RECORDED QUALITY DATA

PHS Station No.: 390
Location: Deep Fork River near Beggs, Oklahoma
Water Year: 1962

Basin: Arkansas River
Tributary to: North Canadian River
Remarks: Records very good. Occasional minor stratification.

Equations Used to Compute Constituents--
Chlorides: Cl =0.2205 Sp. C.
Sulfates: SO_4=0.0200 Sp. C. + 17
Dissolved Solids: DS =0.5794 Sp. C.

Discharge (cfs) and Specific Conductance, Micromhos/cm (μmhos)

Day	October		November		December		January		February		March		April		May		June		July		August		September	
	cfs	μmhos	cfs	μmhos	cfs	μmhos	cfs	μmhos	cfs	μmhos	cfs	μmhos	cfs	μmhos	cfs	μmhos	cfs	μmhos	cfs	μmhos	cfs	μmhos	cfs	μmhos
1	461	693	125	959	522	678	344	982	334	1155	234	1400	615	829	909	607	880	630	470	744	290	813	174	1400
2	486	673	166	925	451	715	330	1025	332	1162	248	1426	508	932	960	785	1478	538	396	849	230	896	303	939
3	582	780	453	1317	405	763	317	1074	324	1160	385	1491	429	938	999	760	1889	491	337	892	197	857	356	956
4	481	615	565	1040	374	809	317	1100	312	1148	547	1338	379	975	876	747	1966	430	309	867	168	943	1433	533
5	359	636	342	899	353	836	354	1178	302	1150	515	1207	358	1039	702	772	1955	434	277	909	151	972	2056	330
6	312	610	311	801	336	950	493	1325	283	1150	403	1184	354	1121	557	804	2039	436	244	941	139	1006	1303	317
7	280	640	788	773	315	1000	516	1034	265	1170	327	1194	348	1189	451	849	2901	343	216	951	126	1070	773	369
8	257	650	1046	584	297	1000	510	1034	251	1200	298	1176	338	1226	378	914	3601	319	192	922	118	1080	1502	420
9	248	669	1013	555	321	1050	512	1014	244	1228	291	1221	321	1235	320	974	5228	312	192	917	112	1060	2068	356
10	240	676	811	550	467	1100	434	963	239	1248	290	1280	551	1047	277	1006	7467	310	2766	373	105	1075	1289	421
11	497	500	614	562	551	1050	423	1024	237	1258	288	1255	2357	531	240	1051	7680	293	4290	169	96	1099	751	498
12	421	567	488	595	551	1100	416	1064	232	1247	275	1269	2558	485	222	1095	6800	282	4793	190	86	1119	600	602
13	336	839	394	632	455	1100	438	1050	226	1323	258	1309	2223	435	217	1106	5533	297	3068	236	77	1153	552	648
14	233	915	336	681	378	984	444	1074	221	1377	243	1319	1916	569	198	1141	4758	315	1154	332	69	1183	497	650
15	260	789	401	853	516	983	418	1133	236	1397	226	1300	1891	525	180	1206	4670	322	591	349	64	1195	2122	321
16	512	789	1317	676	1247	743	404	1201	286	1506	209	1312	2004	547	166	1244	4973	333	463	382	57	1195	3235	209
17	569	700	1135	604	2514	535	375	1186	304	1517	198	1350	2130	571	155	1250	4765	342	396	470	48	1224	3356	241
18	516	622	653	597	2475	444	357	1164	278	1438	192	1350	1993	621	145	1287	4245	357	353	524	41	1250	2666	283
19	428	602	510	588	2113	441	353	1160	251	1429	187	1361	1355	687	135	1310	3568	414	297	658	35	1268	1678	398
20	352	632	666	681	1705	617	376	1225	233	1369	293	1206	904	764	126	1378	2090	461	249	731	30	1301	1919	368
21	288	647	874	647	1650	528	390	1202	228	1368	1460	993	734	814	117	1379	1052	500	204	706	28	1384	1903	381
22	243	655	2294	518	1710	537	379	1289	231	1400	1611	762	771	837	110	1416	735	547	177	744	24	1402	1730	400
23	216	682	2545	406	1631	566	372	1389	244	1410	993	595	1932	679	101	1450	578	603	172	734	23	1410	1588	400
24	193	721	2193	400	1191	619	379	1281	264	1443	708	631	2283	462	93	1502	505	646	809	484	22	1417	1364	429
25	225	684	1450	451	835	660	395	1224	273	1448	1820	709	1465	585	86	1550	464	702	2247	369	22	1460	902	454
26	194	789	1163	540	659	718	419	1260	265	1420	2444	531	906	693	83	1563	396	797	1789	366	21	1482	682	468
27	170	926	1065	565	574	779	461	1282	256	1400	2140	470	728	797	84	1569	361	756	716	455	21	1500	529	498
28	147	965	929	594	501	830	435	1223	244	1407	1648	575	740	861	161	1989	371	755	411	480	21	1493	412	542
29	133	955	767	625	434	861	374	1161			1253	698	1191	895	176	1778	397	776	302	597	20	1498	328	550
30	125	995	621	649	381	896	349	1150			981	722	1356	639	815	1080	516	785	251	695	19	1525	270	552
31	121	990			356	940	340	1148			763	746			914	509			280	811	23	1495		
Avg.	319	697	868	592	847	673	401	1147	264	1314	701	830	1188	653	353	924	2795	364	916	372	80	1053	1275	386

DAILY FLOW AND CONTINUOUS RECORDED QUALITY DATA

PMS Station No.: 765
Location: Wewoka Creek near Wetumka, Oklahoma
Water Year: 1961

Basin: Arkansas River
Tributary to: North Canadian River
Remarks: Records fair.
Stratification nil.

Equations Used to Compute Constituents--
Chlorides: Cl =0.3469 Sp. C.
Sulfates: SO_4=0.0031 Sp. C. + 20
Dissolved Solids: DS =0.5851 Sp. C.

Discharge (cfs) and Specific Conductance, Micromhos/cm (µmhos)

Day	October		November		December		January		February		March		April		May		June		July		August		September	
	cfs	µmhos	cfs	µmhos	cfs	µmhos	cfs	µmhos	cfs	µmhos	cfs	µmhos	cfs	µmhos	cfs	µmhos	cfs	µmhos	cfs	µmhos	cfs	µmhos	cfs	µmhos
1	7	5549	38	1656	2	3240	530	2494	15	5800	40	3000	1161	850	27	4397	28	2572	19	1820	48	2708	8	2227
2	4	6286	22	1881	2	3230	181	2096	17	5800	36	2937	602	1000	28	4508	25	2792	16	1933	22	2720	6	2182
3	3	6911	14	1814	2	3205	87	1371	16	5800	30	2938	413	1150	26	4453	23	2820	45	2201	15	3142	6	2185
4	2	7000	10	1840	2	3193	57	1164	15	5800	27	3261	288	1275	65	4675	22	2820	42	2135	13	3355	277	3465
5	2	7000	7	1753	18	3186	46	1316	14	5800	27	3394	193	1389	4067	888	22	2978	21	3384	12	3308	281	2033
6	2	6900	5	1700	410	25.4	40	1536	14	5800	138	2770	137	1632	1237	675	22	3010	16	3014	12	3300	104	1922
7	2	6800	4	1634	214	1372	36	1604	16	5700	138	4500	98	1956	644	875	22	3108	929	1639	10	3361	58	1637
8	1	6700	3	1836	202	1076	32	1669	20	5596	56	3256	78	2369	939	623	133	4118	1914	575	9	3400	44	1748
9	1	6600	3	1904	108	1198	28	1773	26	5000	39	2662	175	2833	547	852	162	7043	324	607	9	3466	33	1800
10	1	6500	3	2000	194	1272	24	2100	30	4500	29	2945	185	2900	231	1059	49	2385	148	775	8	3417	26	1867
11	1	6400	2	2000	2029	613	23	2300	30	4000	25	3168	102	2325	154	1113	30	2141	90	973	7	3481	24	1984
12	1	6300	2	2000	359	504	22	2500	26	4200	24	2850	278	1597	119	1350	22	2215	62	1088	7	3495	50	2113
13	1	6000	3	2000	126	761	22	2700	22	4300	24	2552	159	1582	98	1700	18	2185	55	1174	9	3483	2598	845
14	1	5750	3	2218	68	934	25	2850	20	4400	23	2364	98	1581	81	1950	32	2196	807	1233	7	3628	1863	537
15	1	5500	4	2193	52	1010	24	3050	18	4400	21	2264	86	1850	71	2250	365	2536	3293	393	14	3687	461	926
16	1	5200	4	2152	42	1170	24	3200	16	4412	21	2315	89	2245	57	2358	78	2324	794	496	414	3407	265	1255
17	1	5000	4	2133	33	1294	21	3250	16	4561	20	2385	75	2700	107	2300	41	1793	301	775	1031	1447	162	1446
18	62	4200	3	2399	26	1401	18	3300	381	2500	24	2501	62	2988	233	2000	28	1710	170	924	165	985	111	1592
19	626	2700	3	2800	23	1618	17	3362	194	1150	39	2953	57	3154	77	4600	22	1706	113	1189	85	965	83	1885
20	64	3600	3	2800	21	1749	16	3648	80	1100	43	3681	55	3582	60	4575	19	1700	74	1332	55	1146	65	2045
21	46	3500	3	2900	17	1878	15	3849	57	1550	66	3940	53	3650	95	4400	19	1732	75	1543	39	1338	55	2213
22	15	3000	3	2950	13	2013	14	3949	62	1827	60	4181	50	3900	908	1500	15	1895	1389	1122	28	1454	48	2466
23	9	2800	3	2950	9	2195	13	4100	57	2422	61	4354	46	4100	256	1814	13	1997	2496	521	21	1529	40	2610
24	6	2600	3	3000	7	2345	14	4300	49	2192	31	4013	44	4350	110	1179	12	2047	633	542	18	1621	31	2823
25	19	2300	3	3000	9	2500	14	4500	43	2301	31	3949	42	4600	81	1095	414	1561	271	926	14	1741	29	3100
26	173	808	3	3000	11	2700	12	4700	41	2971	650	1458	41	4700	105	1172	572	1564	157	1400	12	1821	33	3450
27	56	1181	3	3050	10	3000	11	4900	37	2884	416	1100	36	4800	93	1930	95	1402	109	1876	10	1881	26	3634
28	27	891	3	3150	9	3100	11	5200	36	2901	195	1250	33	4815	53	2231	46	1355	91	2141	8	1976	27	4068
29	30	897	2	3195	11	3193	10	5500			200	1200	30	4715	40	2201	31	1423	68	2375	7	2095	51	4061
30	108	1596	2	3250	21	3446	11	5900			5018	700	29	4411	33	1893	24	1622	58	2551	8	2100	36	4469
31	84	2233			62	3537	12	5900			4336	700			30	2146			54	2730	11	2150		
Avg.	37	2162	6	2070	133	1066	46	2483	49	2762	383	1007	160	1804	344	1157	80	2246	472	787	69	1956	230	1170

DAILY FLOW AND CONTINUOUS RECORDED QUALITY DATA

PHS Station No.: 765
Location: Wewoka Creek near Wetumka, Oklahoma
Water Year: 1962

Basin: Arkansas River
Tributary to: North Canadian River
Remarks: Records fair.
Stratification nil.

Equations Used to Compute Constituents--
Chlorides: Cl =0.3469 Sp. C.
Sulfates: SO_4=0.0031 Sp. C. + 20
Dissolved Solids: DS =0.5851 Sp. C.

Discharge (cfs) and Specific Conductance, Micromhos/cm (µmhos)

Day	October		November		December		January		February		March		April		May		June		July		August		September	
	cfs	µmhos	cfs	µmhos	cfs	µmhos	cfs	µmhos	cfs	µmhos	cfs	µmhos	cfs	µmhos	cfs	µmhos	cfs	µmhos	cfs	µmhos	cfs	µmhos	cfs	µmhos
1	45	5794	190	1085	87	2133	59	4700	47	4019	52	3800	98	2600	175	1409	20	3457	85	1850	23	1300	47	3046
2	159	4012	159	1440	80	2164	54	4900	45	4050	133	3400	84	2800	129	1621	53	3960	39	1900	18	1200	21	3339
3	129	2842	232	1205	76	2514	52	5000	42	4100	498	1500	73	2950	102	1841	101	4193	23	2400	15	1100	8	2989
4	68	4116	82	2557	75	3141	53	5200	39	4182	396	1000	68	3050	84	1967	54	3276	16	2550	9	1000	6	2679
5	42	3343	43	3111	75	3199	55	5300	37	4363	169	1400	81	3150	74	2003	30	4382	12	2400	6	950	13	2607
6	31	2988	29	3702	69	3387	67	5400	38	4531	110	1500	102	3290	59	2095	21	4000	9	2400	5	900	5	2220
7	25	3050	23	4027	62	3292	71	5500	30	4663	88	1525	92	3816	46	2572	19	3970	30	2150	3	800	4	2223
8	21	3050	19	4074	64	3399	81	5550	27	4932	79	1550	75	4000	41	3250	46	3684	38	1450	2	750	195	2341
9	19	3103	18	3869	402	2047	72	5598	28	5080	77	1600	64	4061	34	3700	58	3950	36	1200	4	756	72	1280
10	168	2645	17	3725	301	1231	48	5601	28	5250	66	1650	55	4126	29	4100	1199	1179	32	775	5	647	15	1188
11	810	1392	17	3726	214	2001	48	5247	26	5355	61	2100	55	4012	27	4200	1348	476	14	698	4	568	8	1180
12	167	1423	17	3750	180	2141	42	4634	25	5013	56	3100	52	4014	35	4464	251	975	4	684	4	473	5	1285
13	88	1368	17	3695	114	2062	43	4385	25	5219	48	3321	46	4086	33	4700	153	921	3	705	3	399	4	1416
14	62	1296	17	3631	99	1779	54	4133	25	5566	43	3550	42	4009	29	4100	116	991	2	756	3	383	3	1513
15	47	1332	309	1622	115	1569	95	4305	27	5507	40	3599	40	3922	16	3600	74	909	2	793	3	364	79	2614
16	37	1541	752	1386	667	1645	81	4687	45	5768	38	3776	36	4137	13	3550	53	1001	1	825	3	369	105	1402
17	30	1710	147	1752	1136	704	65	4579	41	6082	34	3800	332	2929	12	3475	38	1187	1	850	3	347	29	1680
18	26	1861	77	1530	434	732	59	4745	33	6321	32	3950	319	905	12	3439	26	1323	1	875	3	305	19	1895
19	22	1960	60	1490	293	1124	55	4782	29	5876	32	4100	128	2170	10	3465	20	1969	1	900	3	270	18	2049
20	20	2152	54	1420	192	1424	50	4675	27	4886	457	1443	92	1700	10	3586	18	2048	32	1000	2	283	69	2622
21	17	2319	90	1142	148	1700	42	4261	47	4562	1083	1202	65	1600	9	4226	16	1713	168	1200	2	300	51	1381
22	16	2400	2173	756	141	2053	52	4179	65	4887	193	1318	591	1300	17	5186	19	1676	31	1350	2	290	20	1845
23	15	2489	1661	426	120	2372	53	4278	55	5467	130	1088	5527	610	20	5674	15	1751	12	1500	2	300	11	1712
24	15	2686	457	549	94	2600	50	3955	86	4859	228	1125	2253	575	45	5766	75	2242	245	1280	3	300	9	1569
25	17	2983	267	790	81	2950	63	4211	68	3959	1180	825	930	797	62	4384	141	2348	94	1400	3	300	8	1524
26	17	3333	195	1090	78	3100	83	4361	53	3700	422	900	674	937	58	4908	71	3710	65	1550	2	300	14	1710
27	16	3512	157	1328	78	3300	89	4453	54	3600	236	1000	599	1094	39	5796	27	2881	147	1600	2	272	12	1519
28	13	3804	128	1687	78	3550	72	4400	49	3700	177	1200	663	1285	69	5707	15	2430	912	950	2	198	9	1250
29	12	3988	110	1864	62	3750	58	4344			132	1600	403	1306	156	3670	11	2400	198	1050	2	232	6	1414
30	14	4038	97	1974	56	4100	53	4200			111	1800	249	1235	97	2905	388	2146	59	1250	2	293	5	1401
31	329	1343			58	4400	50	4120			103	2100			31	2499			35	1500	2	500		
Avg.	82	2099	254	1008	185	1727	60	4712	41	4730	210	1338	463	1057	51	3169	156	1350	76	1220	5	808	29	2043

DAILY FLOW AND CONTINUOUS RECORDED QUALITY DATA

PRS Station No.: 388
Location: North Canadian River near Wetumka, Oklahoma
Water Year: 1961

Basin: Arkansas River
Tributary to: Arkansas River
Remarks: Records good. Occasional minor stratification.

Equations Used to Compute Constituents--
Chlorides: Log Cl =1.1024 Log Sp.C.-0.9627
Sulfates: SO_4=0.052; Sp. C. + 24
Dissolved Solids: DS =0.6074 Sp. C.

Discharge (cfs) and Specific Conductance, Micromhos/cm (μmhos)

Day	October		November		December		January		February		March		April		May		June		July		August		September	
	cfs	μmhos	cfs	μmhos	cfs	μmhos	cfs	μmhos	cfs	μmhos	cfs	μmhos	cfs	μmhos	cfs	μmhos	cfs	μmhos	cfs	μmhos	cfs	μmhos	cfs	μmhos
1	98	2223	1878	745	207	1374	355	1603	272	1709	248	1650	1433	610	222	1824	305	1496	292	1350	294	1163	111	1754
2	145	2109	1478	780	202	1505	292	1692	245	1909	222	1620	1238	680	210	1911	297	1500	236	1380	258	1307	100	1989
3	114	2075	1178	782	204	1450	246	1822	207	1831	203	1530	1029	1050	194	1856	416	1309	249	1300	231	1386	98	1900
4	100	2125	896	756	209	1450	214	1802	187	1634	209	1600	862	950	302	1471	366	1193	222	1512	290	1314	169	1764
5	100	2265	791	800	239	1460	198	1769	207	1745	224	1600	748	962	3142	700	288	1468	226	1540	203	1353	270	1585
6	127	2264	716	872	663	1087	195	1758	236	1925	385	1300	583	902	1210	508	248	1500	182	1454	189	1595	226	1401
7	103	2074	618	973	493	893	178	1836	238	1647	579	1180	587	1063	1200	310	291	1480	2621	605	184	1700	207	1449
8	89	2350	550	1036	377	1260	167	1963	242	1557	359	1300	662	2178	933	447	569	1250	3195	175	183	1750	311	1710
9	85	2046	469	959	394	1329	158	1825	242	1544	301	1470	952	1167	1196	756	542	1313	742	449	185	1880	257	2000
10	79	1826	390	993	423	1471	156	1774	242	1588	256	1460	1065	1123	642	758	489	1463	419	673	170	1840	187	1550
11	71	1982	348	1100	1189	659	155	1910	242	1580	245	1480	851	1153	528	803	712	1231	303	963	158	1790	149	1200
12	70	2174	317	1181	751	789	150	1905	242	1620	239	1100	822	1020	572	1096	600	1174	301	1055	172	1880	266	1050
13	67	2150	307	1190	660	942	143	1920	243	1625	266	1540	679	1200	382	1155	718	1012	835	986	158	1900	3585	636
14	66	2002	314	1210	697	897	152	1948	251	1650	275	1650	556	1280	301	1291	694	1061	1615	598	165	1900	4142	410
15	66	2104	310	1431	539	1174	146	1910	253	1632	253	1600	520	1220	523	1298	1164	914	3052	428	191	1880	2699	600
16	66	2210	287	1383	413	998	139	1944	260	1580	237	1418	514	1300	560	1417	885	968	1251	346	264	1700	3055	510
17	67	2289	272	1299	350	969	138	2173	284	1536	246	1405	512	1380	541	1309	1256	988	869	630	473	1159	2315	481
18	139	1868	284	1353	336	1066	141	2286	674	916	273	1415	470	1359	624	1330	1281	1096	529	856	1022	604	1105	492
19	237	1582	275	1384	324	1215	155	2253	783	1252	265	1400	433	1390	685	1739	765	1171	397	737	520	458	700	589
20	211	1521	272	1274	342	1306	185	2215	663	890	274	1404	348	1400	586	1461	605	1194	330	736	321	424	720	657
21	1184	1484	266	1365	279	1338	171	2265	605	754	311	1486	294	1400	674	1307	515	1128	283	754	235	572	730	900
22	1107	1209	260	1359	244	1352	172	2202	536	1150	335	1552	270	1400	3758	576	377	1137	5875	443	198	727	616	996
23	687	1312	245	1273	214	1319	186	1840	513	1088	352	1595	242	1413	1245	606	394	1144	6512	304	176	859	479	1088
24	423	1141	231	1239	200	1398	205	1812	454	1120	464	1546	208	1506	796	569	531	1231	2381	308	167	1370	440	1110
25	374	1072	221	1246	193	1417	177	2196	354	1128	460	1454	192	1400	623	758	672	1200	1606	477	153	1479	534	1250
26	283	1033	221	1291	190	1668	103	2379	277	1156	598	1116	178	1481	619	880	1076	1280	1098	651	142	1482	476	1420
27	261	1022	226	1317	191	1900	237	2141	254	1300	644	1274	159	1624	419	1050	883	1260	728	693	136	1540	437	1380
28	373	1104	219	1292	189	1998	248	850	262	1400	685	1246	161	1703	388	1200	573	950	506	759	134	1621	489	1150
29	578	1128	209	1248	189	1882	209	820			624	1369	159	1674	366	1226	451	700	404	833	126	1725	683	1120
30	939	893	209	1291	192	1679	193	1820			1442	960	161	1665	329	1355	366	1200	345	930	127	1769	1245	1380
31	2178	942			223	1734	166	1668			1914	750			322	1473			320	959	134	1625		
Avg.	340	1295	475	996	364	1165	185	1916	338	1325	432	1270	563	1075	777	875	611	1156	1223	509	237	1336	893	772

DAILY FLOW AND CONTINUOUS RECORDED QUALITY DATA

PMS Station No.: 388
Location: North Canadian River near Wetumka, Oklahoma
Water Year: 1962

Basin: Arkansas River
Tributary to: Arkansas River
Remarks: Records good. Occasional minor stratification.

Equations Used to Compute Constituents--
Chlorides: Log Cl =1.1024 Log Sp.C.-0.9627
Sulfates: SO_4=0.0521 Sp. C. + 24
Dissolved Solids: DS =0.6074 Sp. C.

Discharge (cfs) and Specific Conductance, Micrombos/cm (umhos)

	October		November		December		January		February		March		April		May		June		July		August		September	
Day	cfs	umhos	cfs	umhos	cfs	umhos	cfs	umhos	cfs	umhos	cfs	umhos	cfs	umhos	cfs	umhos	cfs	umhos	cfs	umhos	cfs	umhos	cfs	umhos
1	907	1250	236	1732	474	1787	392	1765	273	1900	330	1624	244	1574	623	609	693	706	976	1046	162	1880	350	1022
2	693	850	289	1624	451	1721	411	1877	257	1973	379	1571	238	1559	499	882	511	1083	795	890	175	1860	212	777
3	517	820	590	1481	419	1400	435	1995	246	1984	486	1456	223	1707	408	1202	3610	681	834	950	172	1500	109	746
4	492	950	1189	1191	406	1505	463	2000	245	2038	458	1411	230	1782	332	1124	2857	571	715	1107	150	1340	125	1023
5	461	1091	1313	886	405	1533	499	2036	245	2069	371	1617	250	1737	264	1225	1416	500	612	1150	143	1368	229	1208
6	310	1152	1139	776	403	1563	530	2075	239	2107	344	1799	254	1787	260	1271	1347	500	555	1170	153	1503	177	1786
7	279	1294	732	680	388	1600	520	1977	225	2200	294	1700	246	1900	249	1542	1133	592	529	1200	153	1631	186	1190
8	257	1468	509	663	380	1627	530	1770	272	2239	273	1700	245	1920	241	1825	1390	823	485	1438	119	1700	793	810
9	241	1442	583	756	481	1588	524	1578	451	2301	266	1700	241	1950	240	1888	1637	973	456	1300	108	1807	451	809
10	328	1339	648	969	562	1395	410	1670	491	1799	257	1715	235	1928	281	1915	3977	644	346	1352	98	1543	314	1022
11	607	782	663	1036	583	1259	306	1845	478	1584	256	1865	239	1915	375	2012	3283	413	248	1381	88	1612	335	832
12	424	1352	640	916	546	1250	263	1900	403	1561	263	1929	472	1600	281	1939	3663	731	204	1370	79	1786	293	708
13	1279	1399	552	1156	512	1305	300	1836	374	1562	216	2099	459	900	204	1837	3284	714	174	1474	81	1843	184	1453
14	1109	851	466	1087	488	1240	350	1800	388	1586	208	2200	570	1100	175	1867	1718	682	152	1505	82	1888	134	1700
15	605	749	652	831	504	1268	401	1599	391	1606	218	2173	399	1500	165	1955	947	692	166	1543	83	1940	447	1000
16	504	910	989	867	847	1339	451	1681	393	1627	249	2144	304	1440	168	2000	690	707	164	1636	81	1920	686	650
17	651	840	723	1145	1697	800	445	1768	381	1673	252	2081	303	1406	166	2050	795	784	142	1741	76	1920	450	850
18	446	995	984	1174	1241	615	394	1741	374	1656	256	1867	459	1292	164	2137	1149	1000	175	1719	73	1980	233	731
19	353	1015	955	1185	996	690	306	1574	380	1649	277	1773	549	1539	161	2150	1412	967	148	1625	69	2100	211	965
20	332	1120	784	1023	782	1019	250	1765	419	1690	397	1590	362	1800	160	2131	1110	1255	139	1669	65	2200	200	1336
21	312	1400	758	973	695	1093	200	1861	423	1598	1359	1210	293	1950	156	2142	1058	1308	211	1414	61	2350	217	1080
22	269	1380	2552	496	596	985	150	1814	406	1587	758	954	391	1500	147	2200	893	1300	242	1528	59	2362	143	1300
23	272	1340	1634	458	506	1148	125	1925	419	1600	534	832	3272	750	152	2165	810	1300	164	1699	55	2450	115	1300
24	270	1380	1163	540	482	1283	283	1873	432	1590	648	874	1519	696	246	1298	869	1300	930	971	76	2556	121	1500
25	332	1320	886	689	457	1321	445	1755	394	1619	1500	783	947	737	187	1803	976	1472	534	508	98	2501	226	1976
26	357	1385	732	1966	432	1441	464	1658	368	1623	797	802	654	1111	175	1499	984	1264	207	741	73	2307	162	2355
27	257	1428	642	1012	427	1545	424	1931	364	1577	455	872	612	1356	176	1716	794	1258	174	1167	57	2115	128	2161
28	233	1428	544	1087	416	1668	370	2029	328	1574	384	997	811	1250	186	1936	836	1170	159	1505	55	1864	111	1491
29	228	1495	496	1178	400	1662	337	1992			364	1183	2128	1024	423	1938	885	1187	198	1514	53	1811	99	1400
30	223	1523	483	1269	387	1622	311	1927			311	1399	981	676	1567	1120	1568	752	215	1530	52	1639	103	1309
31	323	1482			380	1720	289	1828			278	1599			860	880			190	1650	86	1295		
Avg.	448	1131	816	898	573	1224	373	1825	359	1736	433	1328	604	1152	313	1454	1542	806	363	1294	95	1818	253	1070

DAILY FLOW AND CONTINUOUS RECORDED QUALITY DATA

USGS Station No.: 387
Location: North Canadian River near Oklahoma City, Oklahoma
Water Year: 1961

Basin: Arkansas River
Tributary to: South Canadian River
Remarks:

Equations Used to Compute Constituents--
Chlorides: Log Cl =1.3975 Log Sp.C.-1.9511
Sulfates: SO_4=0.0337 Sp. C. + 162
Dissolved Solids: DS =0.6012 Sp. C.

Discharge (cfs) and Specific Conductance, Micromhos/cm (umhos)

Day	October		November		December		January		February		March		April		May		June		July		August		September	
	cfs	umhos	cfs	umhos	cfs	umhos	cfs	umhos	cfs	umhos	cfs	umhos	cfs	umhos	cfs	umhos	cfs	umhos	cfs	umhos	cfs	umhos	cfs	umhos
1	92	1826	1179	900	89	1945	55	2516	196	1475	80	2207	611	1238	209	1950								
2	45	7720	1091	1000	114	1831	52	2704	155	1550	143	1718	382	1200	197	1800								
3	82	2202	803	1100	98	1973	55	2622	157	1550	160	1563	410	1100	136	1900								
4	67	2388	459	1220	305	1761	56	2643	146	1600	183	1686	529	1248	326	1763								
5	65	2791	471	1350	271	1386	58	2736	155	1550	145	1687	570	1225	188	1734								
6	51	2776	303	1500	225	1450	53	2738	153	1550	146	1918	577	1350	165	1812								
7	48	2903	219	1620	209	1900	51	2806	166	1600	147	1778	629	1370	351	1617								
8	46	2901	150	1800	136	2000	48	2722	165	1650	243	1691	585	1233	483	1500								
9	41	2988	184	1513	135	1973	53	2681	183	1675	219	1690	689	1000	137	1600								
10	49	2919	212	1402	458	1255	52	2717	188	1700	131	1728	471	975	279	1250								
11	49	2697	159	1545	514	1071	49	2653	210	1849	131	1716	422	1175	619	1175								
12	55	2634	135	1642	302	1332	44	2727	231	1470	143	1712	477	1300	579	1350								
13	53	2759	163	1518	251	1500	42	2780	240	1420	168	1728	400	1410	515	1412								
14	60	2714	141	1600	296	1504	112	1944	243	1430	142	1667	337	1408	590	1225								
15	54	2896	152	1712	299	1334	168	1557	245	1430	118	1676	334	1499	569	1300								
16	54	2942	165	1554	330	1365	93	1838	243	1480	115	1745	178	1550	585	1326								
17	59	2889	173	1530	104	1534	101	2584	508	1000	186	1958	167	1849	614	1438								
18	1323	1239	124	1600	72	1567	124	2335	499	1175	245	1779	162	1704	455	1400								
19	2135	1142	116	1600	70	1575	230	1594	409	1300	174	1718	94	2161	228	1525								
20	963	916	115	1600	78	2000	133	1709	313	1400	441	1484	68	2658	196	1600								
21	90	1129	143	1565	89	3000	154	1519	148	1450	265	1518	66	2751	185	2000								
22	30	1889	158	1500	53	2900	105	1796	59	2050	273	1536	64	2661	210	1800								
23	197	810	147	1537	51	2850	101	1906	156	1614	410	1470	57	2862	89	1700								
24	316	730	83	1718	51	2950	99	1940	126	1616	382	1286	58	2867	191	1650								
25	391	850	147	1567	51	3000	111	1894	77	1733	369	1150	68	2715	205	1625								
26	605	550	136	1516	51	3000	158	1608	71	1765	299	1200	164	1773	236	1566								
27	1048	525	134	1569	51	3000	118	1778	101	1695	290	1300	103	1911	228	1515								
28	1997	630	162	1654	53	3000	84	2219	91	1907	216	1400	122	1965	222	1560								
29	3044	775	154	1562	51	2800	96	2502			255	1430	179	1719	217	1584								
30	2394	810	114	1684	51	2790	177	2300			504	1300	199	1884	204	1650								
31	1842	850			86	2729	137	1800			828	1225			197	1675								
Avg.	559	949	270	1309	161	1556	95	2087	201	1641	243	1515	305	1386	310	1494								

DAILY FLOW AND CONTINUOUS RECORDED QUALITY DATA

PMS Station No.: 762
Location: North Canadian River near Oklahoma City, Oklahoma
Water Year: 1961

Basin: Arkansas River
Tributary to: Canadian River
Remarks: Records good. Stratification nil.

Equations Used to Compute Constituents--
Chlorides: Cl =0.1300 Sp. C.
Sulfates: SO_4=0.1797 Sp. C.
Dissolved Solids: DS =0.6473 Sp. C.

Discharge (cfs) and Specific Conductance, Micromhos/cm (μmhos)

Day	October		November		December		January		February		March		April		May		June		July		August		September	
	cfs	μmhos	cfs	μmhos	cfs	μmhos	cfs	μmhos	cfs	μmhos	cfs	μmhos	cfs	μmhos	cfs	μmhos	cfs	μmhos	cfs	μmhos	cfs	μmhos	cfs	μmhos
1	15	1150	916	875	72	1098	5	850	110	1213	78	1104	425	1086	143	1296	17	1150	12	775	10	1100	9	1033
2	30	1350	798	944	73	1132	6	851	118	1176	106	1170	262	1079	80	1300	20	1100	11	775	9	1100	8	1045
3	16	1275	591	986	39	1106	5	858	101	1097	114	1140	414	1105	148	1227	20	1050	10	850	17	1050	15	1002
4	16	1349	465	1010	108	1170	6	859	89	1087	101	1130	442	1070	121	1246	19	1050	9	1000	23	1010	30	498
5	15	1201	271	1007	151	1224	6	868	89	1178	78	1151	466	1127	117	1275	129	1050	9	1050	13	1020	15	855
6	12	1111	243	1015	113	1271	6	866	79	111	79	1180	492	1150	129	1274	212	1030	9	1100	27	1030	12	939
7	10	1100	115	1057	52	1248	6	866	101	1110	108	1180	481	1150	343	1250	329	1027	9	1100	11	1030	15	952
8	9	1044	144	1093	53	1233	5	852	103	1107	176	1125	390	1150	159	958	627	1008	7	1100	9	1030	13	914
9	9	1050	222	1058	86	1218	5	887	126	1123	93	1260	477	1126	17	62	639	983	7	1100	8	1030	8	966
10	9	1031	157	1053	122	1216	5	923	146	1166	85	1300	344	1144	546	1041	408	935	7	1100	8	1014	8	996
11	9	978	121	1108	210	1184	5	917	172	1153	101	1280	336	1115	528	1202	496	956	7	980	8	1019	8	1033
12	9	1000	137	1132	117	1144	5	897	183	1084	112	1280	357	1114	463	1226	451	1127	7	990	8	999	289	888
13	9	1025	131	1125	166	1080	38	1008	183	1089	106	1300	268	1147	509	1237	422	1163	10	972	14	629	3368	445
14	9	1050	126	1146	170	1050	103	990	183	1111	73	1271	224	954	580	1240	784	1162	18	902	10	805	4370	428
15	9	1100	132	1195	168	996	63	987	175	1121	70	1257	123	1098	493	1249	1443	1065	15	895	8	953	992	401
16	9	1100	144	1223	120	1000	51	1113	172	1110	70	1250	86	1160	512	1250	452	939	12	1011	8	990	240	312
17	13	1050	124	1208	6	1025	66	1136	260	1140	71	1250	85	1157	523	1241	225	827	10	1055	7	1028	221	407
18	220	868	105	1123	6	1050	119	1019	338	1100	114	1250	51	1149	190	1221	151	900	9	1055	7	1036	135	523
19	2181	820	104	1052	6	950	113	973	278	1100	135	1289	10	886	148	1210	406	1020	8	1051	7	1054	72	595
20	515	804	110	1071	50	763	95	1009	142	1112	162	1294	9	841	102	1210	448	1150	8	1065	7	1039	224	680
21	13	723	134	1173	6	861	57	1104	6	1107	213	1234	9	853	15	511	438	1200	34	984	7	1040	215	810
22	123	346	137	1142	5	884	52	1120	77	1066	215	1159	8	891	19	831	347	1170	58	947	22	1012	128	849
23	257	628	83	1179	5	881	52	1137	102	1066	498	1164	8	978	92	1142	197	1176	24	653	14	1000	114	887
24	259	553	104	1132	5	923	88	1057	45	1018	347	1178	8	934	151	1161	348	1188	14	888	11	1020	115	992
25	216	824	117	1120	5	877	91	1062	34	1041	326	1178	21	1022	161	1180	171	1163	29	989	10	1023	191	1111
26	8298	716	110	1130	5	926	69	1070	58	1043	322	1154	81	1169	173	1195	88	900	93	990	9	1035	251	750
27	922	571	117	1145	5	917	17	1070	51	1032	207	1150	45	1206	171	1200	16	850	48	1042	8	1033	169	500
28	2220	366	117	1117	4	888	4	989	38	1051	215	1150	102	1240	171	1200	14	800	14	1033	10	1035	174	526
29	3666	501	96	1107	4	890	8	980			140	1150	131	1263	144	1200	16	870	11	1006	9	1035	37	453
30	2195	545	57	1098	5	893	105	1116			343	1158	95	1270	162	1193	14	780	10	1008	8	1050	17	651
31	1533	607			5	870	143	1212			566	1145			93	1190			10	1030	8	1030		
Avg.	475	598	208	1033	63	1142	45	1059	127	1109	175	1179	210	1122	232	1203	313	1062	17	970	11	1005	382	495

DAILY FLOW AND CONTINUOUS RECORDED QUALITY DATA

PRS Station No.: 349
Location: North Canadian River near Oklahoma City, Oklahoma
Water Year: 1967

Basin: Arkansas River
Tributary to: Canadian River
Remarks: Records good. Stratification nil.

Equations Used to Compute Constituents--
Chlorides: Cl =0.1300 Sp. C.
Sulfates: SO_4=0.1797 Sp. C.
Dissolved Solids: DS =0.6673 Sp. C.

Discharge (cfs) and Specific Conductance, Micrombos/cm (umhos)

Day	October		November		December		January		February		March		April		May		June		July		August		September	
	cfs	umhos	cfs	umhos	cfs	umhos	cfs	umhos	cfs	umhos	cfs	umhos	cfs	umhos	cfs	umhos	cfs	umhos	cfs	umhos	cfs	umhos	cfs	umhos
1	12	680	61	1436	148	1333	146	1353	9	938	7	943	10	1079	12	1191	31	887	505	1010	13	1089	4	1127
2	11	744	924	654	128	1382	120	1282	49	1045	7	944	8	1016	10	1189	302	1051	488	1099	18	985	4	1058
3	12	780	1297	412	131	1334	150	1240	220	1141	8	955	6	1133	10	1183	586	1046	421	1150	13	1033	7	1024
4	13	833	613	744	181	1389	134	1246	445	1150	8	1014	8	1167	153	1297	158	853	400	1168	13	1065	8	1001
5	13	893	423	392	158	1450	184	1167	365	1150	8	992	8	1149	317	1378	138	704	217	1223	11	1029	8	986
6	13	861	520	520	170	1436	139	1161	468	1137	7	1000	8	1150	160	1242	260	740	7	1019	10	1024	6	1012
7	11	820	490	857	140	1384	126	1180	282	1172	6	1017	8	1165	12	1174	200	660	7	1064	10	1017	6	947
8	11	834	461	1042	186	1490	149	1214	234	1181	6	1011	10	1189	9	1095	252	585	7	1025	9	1006	8	937
9	46	833	244	1043	196	1523	143	1233	244	1245	39	1272	8	1200	9	1071	2187	691	7	1059	8	987	7	913
10	249	934	219	1086	179	1439	111	1220	220	1300	100	1340	10	1200	9	1098	4064	527	60	1134	7	1001	6	910
11	824	685	164	1103	190	1400	91	1243	231	1284	84	1406	9	1250	9	1072	1099	559	7	963	7	996	6	903
12	353	797	165	1103	162	1326	71	1337	213	1290	72	1496	9	1223	9	1050	261	547	8	995	7	969	6	884
13	51	810	203	1067	147	1241	71	1414	217	1282	76	1511	9	1129	9	1050	590	479	8	1067	7	1034	6	860
14	46	588	105	1150	118	1293	57	1400	212	1286	90	1533	9	1083	9	1050	679	641	8	1092	7	990	6	878
15	144	901	219	1190	99	1345	49	1380	230	1300	96	1467	9	1138	9	1050	1092	1262	7	1086	7	1010	6	895
16	99	777	494	1011	144	1392	71	1377	212	1300	102	1396	9	1132	8	1049	1168	1784	7	1051	7	1000	6	876
17	81	603	323	915	273	1265	62	1373	211	1300	177	1285	9	1067	8	1056	998	1331	10	1012	7	1025	6	874
18	62	867	268	902	180	910	30	1355	221	1289	193	1233	9	1118	6	1077	864	1250	8	1010	7	1041	6	900
19	87	703	205	843	151	1091	32	1350	245	1295	193	1233	10	1315	3	1068	768	1250	8	1046	7	1037	6	885
20	66	810	134	983	163	1216	30	1349	203	1279	198	1255	155	1225	3	1088	722	1245	8	1064	7	1026	7	859
21	62	836	242	1030	109	1287	30	1331	190	1276	118	1253	208	1331	4	1100	579	1250	8	1111	7	1028	6	901
22	62	930	262	1068	161	1212	30	1320	177	1300	8	1123	148	1350	4	1100	535	1250	9	1042	7	1029	6	944
23	62	1008	261	1001	126	1178	30	1318	179	1310	8	1125	61	1177	4	1123	667	1208	9	1079	6	1006	6	923
24	63	1101	192	1036	110	1255	30	1310	177	1360	7	1106	9	1245	4	1116	644	1109	10	1188	6	1000	6	936
25	68	1136	263	1137	117	1384	29	1362	176	1309	11	1111	9	1181	3	1125	661	1019	12	1097	6	1039	6	958
26	53	1190	284	1200	119	1446	30	1306	189	1376	8	1117	9	1179	3	1146	596	884	13	1075	6	1005	5	924
27	47	1235	200	1256	112	1462	10	1043	8	1028	7	1131	9	1185	4	1150	469	978	14	1072	6	1018	5	870
28	6	1111	122	1259	106	1431	9	975	73	1013	8	1049	9	1195	3	1083	496	981	14	1140	5	1038	5	823
29	43	1228	130	1293	108	1401	9	986			14	1041	9	1151	3	1062	753	1061	14	1135	6	1033	5	893
30	43	1199	138	1282	108	1365	9	992			8	1066	14	1204	3	1098	661	1008	14	1093	6	1041	5	890
31	43	1440			126	1350	9	965			7	1016			3	1115			14	1103	5	1042		
Avg.	108	871	323	853	146	1336	70	1255	205	1142	54	1305	27	1163	26	1256	756	90	75	1111	8	1023	6	925

DAILY FLOW AND CONTINUOUS RECORDED QUALITY DATA

PHS Station No.:	368	Basin:	Arkansas River	Equations Used to Compute Constituents**	
Location:	Canadian River at Calvin, Oklahoma	Tributary to:	Arkansas River	Chlorides:	Log Cl =1.3039 Log Sp.C.-1.6366
Water Year:	1961	Remarks:	Records fair. Frequent minor stratification.	Sulfates:	SO_4=0.0899 Sp. C. + 14
				Dissolved Solids:	DS =0.6172 Sp. C.

Discharge (cfs) and Specific Conductance, Micromhos/cm (µmhos)

Day	October cfs	October µmhos	November cfs	November µmhos	December cfs	December µmhos	January cfs	January µmhos	February cfs	February µmhos	March cfs	March µmhos
1	1612	1700	2305	650	240	1690	3361	1207	409	1800	1160	1600
2	1099	1150	1191	725	232	1700	2660	1144	447	1750	866	1670
3	592	1200	908	925	222	1736	1784	1200	451	1725	795	1750
4	559	1200	739	1014	289	1703	1374	1250	396	1700	919	1750
5	437	1300	652	1090	446	1313	948	1300	429	1700	1424	1650
6	767	1092	632	1117	3027	1565	696	1350	531	1700	1797	1950
7	607	883	581	1132	2409	1036	607	1400	687	1550	2281	2026
8	262	1031	555	1190	2171	766	607	1500	901	1461	1075	2011
9	213	1150	1005	900	1238	786	592	1600	967	1380	708	1637
10	210	1300	572	1065	2488	520	674	1700	755	1299	665	1628
11	185	1600	609	1100	9613	593	699	1700	597	1572	635	1709
12	157	1550	372	1125	4024	550	667	1715	505	1674	706	1769
13	143	1568	320	1275	1840	725	656	1733	478	1700	546	1868
14	1188	1264	354	1650	1438	815	670	1700	569	1624	481	1895
15	1747	926	300	1500	1200	900	630	1750	3531	1500	388	1919
16	1464	790	294	1575	1003	1100	566	1830	2500	1666	345	1983
17	1362	710	286	1550	917	1200	556	1900	1631	1673	363	2016
18	2633	752	273	1575	1674	1600	559	1900	2744	1364	302	1976
19	9703	686	280	1600	1541	1700	551	1900	2167	1670	292	1873
20	2788	724	288	1650	1175	1725	606	1900	1720	1497	743	1875
21	5095	657	297	1675	1190	1800	551	1900	1161	1183	818	2061
22	7791	937	296	1700	1009	1800	435	1900	978	1767	1008	2003
23	3671	1237	285	1700	875	1800	368	1900	629	1362	977	1535
24	4187	1206	276	1700	889	1800	337	1874	609	1579	2599	1670
25	6517	1225	266	1700	875	1800	231	2025	513	1528	1893	1500
26	6718	1300	266	1700	760	1800	216	2255	373	1600	2939	1530
27	3667	900	279	1700	733	1800	211	2127	563	1663	3380	1530
28	6263	1050	262	1600	840	[illegible]	200	2250	665	1375	1977	1372
29	5385	650	250	1600	1293	1805	230	2261			3361	950
30	1737	600	247	1600	1569	1775	240	2265			19365	725
31	3799	603			1842	1503	367	1918			15205	700
Avg.	3610	923	498	1150	1620	1117	737	1560	976	1315	2783	1375

Day	April cfs	April µmhos	May cfs	May µmhos	June cfs	June µmhos	July cfs	July µmhos	August cfs	August µmhos	September cfs	September µmhos
1	6905	825	221	2067	161	1208	165	1025	276	1250	170	1850
2	3827	900	219	2225	119	1327	169	1220	170	1325	153	1950
3	3733	1175	208	2267	103	1468	249	1600	130	1400	121	1950
4	3035	1400	221	1575	100	1610	130	1546	99	1500	161	1900
5	2403	1600	11778	626	173	1713	163	1612	80	1550	1576	1500
6	3080	1650	2100	563	687	1165	161	1219	71	1630	1548	850
7	2107	1750	626	758	2990	1098	2672	940	73	1700	507	950
8	1716	1850	2922	890	9561	695	2618	1060	72	1750	344	1050
9	7137	1700	2664	1028	6018	916	521	888	165	1810	330	1175
10	7563	1625	1787	1285	3640	959	313	975	158	1550	176	1200
11	1833	1350	1021	1367	1892	1000	197	1050	115	1600	131	1188
12	2227	1382	633	1616	3567	1098	162	1150	92	1525	309	957
13	1583	1360	479	1686	2418	1265	155	1225	83	1500	7653	538
14	1072	1523	390	1741	2086	988	4359	525	90	1550	12017	505
15	963	1781	332	1795	6473	727	7378	610	116	1592	5029	570
16	1071	1899	337	1838	7676	670	2289	550	2435	1199	2773	695
17	776	2030	306	1878	7558	808	978	725	4219	1096	778	530
18	587	1900	6409	683	1803	937	1466	775	1354	737	520	730
19	493	1900	5428	774	799	995	1466	1700	780	700	579	800
20	501	1950	2354	607	607	1071	737	1800	515	705	500	684
21	443	1900	916	602	477	1105	463	1950	477	750	382	990
22	428	1903	4979	687	353	1164	9356	1000	813	610	353	1124
23	416	1837	5131	759	263	1265	9840	700	1485	600	351	1184
24	374	1935	2181	698	217	1300	5650	570	537	750	334	1245
25	375	2100	2164	596	256	1430	3950	600	1108	875	157	1287
26	300	2136	1828	587	606	1275	2239	685	1125	1150	1855	1136
27	281	2197	361	860	569	1414	1238	784	429	1622	1631	963
28	260	2200	475	1213	331	963	810	957	358	1533	1638	400
29	239	2275	313	1113	228	725	526	1087	278	1675	1613	1025
30	225	2175	236	1083	160	750	366	1162	247	1775	953	1100
31			177	1114			263	1207	229	1800		
Avg.	1512	1635	1909	832	1725	917	1971	779	590	1053	1534	746

DAILY FLOW AND CONTINUOUS RECORDED QUALITY DATA

PHS Station No.: 368
Location: Canadian River at Calvin, Oklahoma
Water Year: 1962

Basin: Arkansas River
Tributary to: Arkansas River
Remarks: Records fair. Frequent minor stratification.

Equations Used to Compute Constituents--
Chlorides: Log Cl =1.3039 Log Sp.C.-1.6386
Sulfates: SO_4=0.0899 Sp. C. + 14
Dissolved Solids: DS =0.6172 Sp. C.

Discharge (cfs) and Specific Conductance, Micromhos/cm (µmhos)

Day	October		November		December		January		February		March		April		May		June		July		August		September	
	cfs	µmhos	cfs	µmhos	cfs	µmhos	cfs	µmhos	cfs	µmhos	cfs	µmhos	cfs	µmhos	cfs	µmhos	cfs	µmhos	cfs	µmhos	cfs	µmhos	cfs	µmhos
1	1024	900	340	2122	846	1681	612	1700	940	1437	225	2016	430	1573	1852	805	994	532	896	1100	121	1208	27	1622
2	3327	708	389	1495	1045	1751	614	1750	1724	1452	339	1789	349	1619	1314	982	11083	630	545	1100	112	1268	116	1620
3	2451	709	7066	866	908	1800	542	1685	1571	1577	875	2204	273	1634	733	1243	11095	490	479	1100	2571	1733	242	1246
4	862	809	7276	710	785	1796	556	1704	872	1604	1591	1908	249	1852	468	1347	5485	500	309	1110	12416	1800	181	931
5	590	1099	1754	700	595	1800	521	1700	546	1664	891	1431	486	1852	386	1506	3813	525	220	1246	8996	1782	148	925
6	430	1172	766	710	736	1800	484	1763	542	1710	652	1423	1298	1438	372	1650	2617	600	180	1318	6337	1666	596	1236
7	340	1270	689	760	812	1800	437	1850	522	1782	569	1498	643	1236	350	1711	5405	695	142	1400	3709	1650	545	1178
8	275	1455	731	827	937	1698	384	1830	446	1881	462	1515	474	1523	298	1871	3266	770	119	1400	1850	1650	2198	1139
9	260	1557	580	898	2345	1281	292	2100	456	1845	407	1534	412	1753	248	2000	2928	790	98	1427	995	1660	971	939
10	999	971	486	992	1495	1129	236	2286	522	1828	401	1631	405	1790	214	2100	18833	550	104	1422	604	1804	417	925
11	4972	674	440	1094	974	1352	200	2491	498	1864	383	1871	359	1720	214	2300	13902	530	82	1564	444	1898	343	1172
12	7008	685	475	1180	883	1551	169	2350	455	1913	347	1949	345	1727	184	2400	5884	610	65	1837	313	1892	252	1091
13	2743	732	503	1246	701	1567	256	2225	418	1930	314	1980	480	2031	147	2450	3080	725	56	1806	268	1881	300	1045
14	1596	860	499	1338	647	1637	388	1783	376	1988	258	1987	788	1701	116	2475	2401	800	49	1802	226	1800	193	1010
15	1265	838	1404	1269	822	1638	431	1830	369	1950	233	2025	671	1393	99	2463	1979	850	101	1415	183	1800	400	850
16	1642	805	1556	1158	1799	1341	502	1842	360	1918	222	2088	486	1394	88	2587	1179	950	92	1113	144	1858	2365	966
17	724	850	2169	1169	4865	1180	743	1700	363	1900	222	1988	688	1238	82	2612	962	1000	53	1606	123	1976	829	789
18	448	954	2260	1241	3244	894	849	1700	364	1855	209	1900	658	1329	75	2764	900	1100	50	1452	98	2011	432	926
19	371	1037	1907	1088	2187	899	651	1699	413	1812	204	1933	521	1680	71	2899	1206	775	51	1862	78	2111	496	1004
20	324	1153	1281	1041	1500	963	500	1685	398	1869	3359	752	394	2268	69	3047	1806	593	48	1815	61	2152	2925	1137
21	291	1278	1830	933	919	1084	400	1791	360	1900	3219	612	319	2041	65	3113	682	739	223	1397	49	2164	3456	934
22	273	1380	10785	752	836	1199	282	1900	378	1900	1681	1006	2036	1147	62	3137	504	999	201	794	36	2200	1259	689
23	259	1497	10093	720	671	1333	196	2150	475	1875	1063	1095	7108	1031	63	3163	401	1087	106	1093	25	2210	597	650
24	235	1694	4091	794	565	1396	270	2075	414	1874	1421	947	4762	881	163	1898	708	634	140	1082	28	2170	1163	830
25	211	1726	2027	940	572	1400	651	1700	453	2075	2111	877	2970	905	265	1635	1606	700	145	1387	25	2146	2395	932
26	197	1600	1178	1064	1625	1446	805	1700	382	1942	1023	1206	1336	1055	338	2089	3677	800	161	1771	24	2275	1515	825
27	174	1705	906	1186	980	1540	808	1650	297	1809	680	1421	1558	1034	439	1921	3108	1000	176	1473	51	2028	588	900
28	163	1783	887	1306	765	1538	783	1630	272	2123	568	1383	2640	1293	551	2532	1409	975	182	1578	26	1469	381	1050
29	163	1847	1120	1397	637	1613	703	1600			566	1517	5327	868	1372	1276	1468	1089	305	1735	15	1385	287	1117
30	183	2033	642	1523	634	1643	781	1498			558	1403	3372	732	4015	849	939	1116	223	1997	9	1481	284	1106
31	261	2169			616	1637	1596	1456			666	1387			1810	773			131	1459	8	1611		
Avg.	1099	846	2204	899	1192	1349	537	1733	542	1753	830	1238	1395	1129	533	1292	3777	646	185	1322	1288	1749	863	973

DAILY FLOW AND CONTINUOUS RECORDED QUALITY DATA

PHS Station No.: 367
Location: Little River near Sasakwa, Oklahoma
Water Year: 1961

Basin: Arkansas River
Tributary to: South Canadian River
Remarks: Records good. Occasional minor stratification.

Equations Used to Compute Constituents--
Chlorides: Cl =0.3086 Sp. C.
Sulfates: SO_4=0.0070 Sp. C. + 18
Dissolved Solids: DS =0.5886 Sp. C.

Discharge (cfs) and Specific Conductance, Microsmhos/cm (umhos)

Day	October		November		December		January		February		March		April		May		June		July		August		September	
	cfs	umhos	cfs	umhos	cfs	umhos	cfs	umhos	cfs	umhos	cfs	umhos	cfs	umhos	cfs	umhos	cfs	umhos	cfs	umhos	cfs	umhos	cfs	umhos
1	29	2625	165	1681	33	3077	737	1726	91	4690	105	3063	2525	763	78	3625	73	2359	39	2400	67	1636	20	3247
2	26	2731	137	1298	30	3050	312	1496	96	4053	102	2920	1494	923	77	3795	61	2690	33	2649	55	1878	17	3400
3	21	2929	108	1205	30	3063	250	1652	94	3251	92	2964	868	1353	75	3775	58	2949	34	2908	50	1965	16	3415
4	19	2670	84	1287	33	3154	204	1674	86	2973	88	2985	549	1640	331	2838	60	3223	30	3238	44	2140	596	3400
5	18	2700	70	1360	151	3554	171	1999	84	2777	93	3145	408	1934	4075	802	71	3401	30	3909	39	2287	420	1234
6	18	2750	62	2013	1103	1850	150	2457	90	2819	298	3781	333	2162	672	1087	80	4000	28	3955	37	2377	207	1340
7	18	2786	56	2250	659	1294	132	2643	94	3441	288	1890	284	2188	417	2015	148	3110	1088	1457	39	2701	120	1467
8	18	3025	52	2386	703	1410	119	2744	107	3883	235	1409	259	2208	486	1921	853	1550	472	1119	42	3411	78	1583
9	18	3119	47	2676	316	1293	109	2807	119	3634	164	1485	503	2683	362	2196	504	950	178	1162	37	2711	55	1783
10	16	3082	49	3328	729	1488	102	2857	118	3599	117	1749	486	1627	320	1756	357	950	100	1232	29	2409	40	1970
11	16	3000	49	3404	2224	800	98	3367	112	3235	96	2109	483	1323	239	1851	242	1000	67	1572	23	2385	32	2264
12	14	3000	41	3126	1033	898	96	3865	108	3004	90	2622	386	1977	167	2083	152	1200	51	1851	20	2509	78	1895
13	15	3000	41	3226	685	861	94	3720	101	2764	86	3312	271	1907	122	2318	101	1400	49	2229	19	2623	3061	798
14	40	3102	43	3559	364	1092	94	3761	94	2787	84	3401	202	2003	110	2620	600	1200	1030	1152	21	2821	2387	628
15	57	6561	46	3863	283	1605	93	3807	87	2820	74	3133	198	2325	110	3371	1344	786	820	1140	25	3290	2286	512
16	36	7601	46	3887	217	1946	89	3768	83	3068	73	3296	181	2428	96	3527	748	611	461	961	1291	1094	1353	533
17	31	4540	49	3863	164	2121	86	3530	83	3232	81	3400	152	2884	195	4209	433	656	363	803	1618	823	575	725
18	691	1679	49	3870	142	2324	86	3391	275	3309	100	3785	139	3000	543	1801	267	992	220	866	689	678	299	1071
19	1274	822	52	3438	127	2720	83	3419	332	1554	113	4628	132	3150	882	737	181	1360	129	1007	351	745	191	1382
20	742	876	53	2988	124	2945	82	3519	399	889	123	3636	124	3275	577	715	134	1640	80	1184	194	956	135	1741
21	473	684	49	2925	106	3108	77	3300	234	1236	138	3198	121	3300	357	989	105	1801	54	1466	119	1086	106	2091
22	270	741	46	3047	81	2641	68	3500	204	2155	133	2898	117	3300	1325	1487	83	1994	1433	859	86	1283	90	2407
23	168	894	42	3038	77	2899	71	3725	205	2106	140	2509	115	3400	1003	779	69	2161	2703	596	69	1639	79	2936
24	119	1126	43	3137	85	3354	74	4175	180	1826	133	1968	110	3400	900	621	58	2380	2633	387	58	1874	71	3171
25	149	1260	40	3299	88	3917	71	4096	155	1850	131	1711	102	3580	488	793	259	2227	1379	454	49	2378	66	3172
26	432	1854	38	3400	90	3636	59	3641	129	2075	653	2383	99	3510	368	1538	238	1118	595	574	41	2915	62	3200
27	121	2115	39	3463	88	3362	59	3512	114	2446	348	1610	90	3240	307	1556	101	1788	307	731	34	2834	61	2920
28	87	2328	38	3526	84	3250	59	3345	109	2755	249	1913	87	3580	222	1261	87	2263	196	921	28	2814	172	3299
29	172	4036	36	3654	111	3300	60	3735			1172	761	82	3660	147	1420	67	2414	138	1158	25	2800	271	2044
30	194	1297	39	3595	156	4119	65	3994			5044	703	79	3550	111	1768	51	2310	102	1312	22	2868	256	1371
31	175	1883			313	2954	81	4718			4709	632			88	2144			80	1535	21	3037		
Avg.	177	1461	57	2613	336	1581	127	2691	142	2475	495	1216	366	1692	499	1295	253	1294	481	828	169	1150	440	926

DAILY FLOW AND CONTINUOUS RECORDED QUALITY DATA

PHS Station No.: 367
Location: Little River near Sasakwa, Oklahoma
Water Year: 1962

Basin: Arkansas River
Tributary to: South Canadian River
Remarks: Records good. Occasional minor stratification.

Equations Used to Compute Constituents--
Chlorides: Cl =0.3086 Sp. C.
Sulfates: SO_4=0.0070 Sp. C. + 18
Dissolved Solids: DS =0.5886 Sp. C.

Discharge (cfs) and Specific Conductance, Micromhos/cm (µmhos)

Day	October		November		December		January		February		March		April		May		June		July		August		September	
	cfs	µmhos	cfs	µmhos	cfs	µmhos	cfs	µmhos	cfs	µmhos	cfs	µmhos	cfs	µmhos	cfs	µmhos	cfs	µmhos	cfs	µmhos	cfs	µmhos	cfs	µmhos
1	209	1468	58	3655	138	2347	113	3174	93	2509	57	3087	99	3841	548	1061	389	629	71	1975	37	2066	12	2833
2	598	1476	73	4187	133	2572	108	3317	84	2621	129	3335	86	3354	306	1498	1182	1208	65	2000	28	1751	12	3035
3	259	1880	134	3618	127	2665	101	2955	79	2660	359	2802	83	2874	199	1818	1793	656	53	2000	21	1607	7	3561
4	143	1463	428	1833	123	2799	99	2849	78	2737	280	1995	75	3155	156	2255	2388	422	43	2000	17	1612	4	3371
5	107	1653	392	879	121	2908	98	3025	76	3000	188	2172	101	3460	131	2515	1524	459	37	2000	14	1717	2	3292
6	85	1817	247	827	111	2881	98	3072	75	2973	151	2100	120	4296	113	2822	785	1019	33	2000	12	1794	13	3224
7	72	1996	162	941	105	2891	88	3001	66	2782	136	2245	110	4004	99	2923	600	850	30	2000	7	1800	31	3236
8	63	2235	120	1284	116	2721	106	3212	64	2767	118	2489	105	3502	94	3074	915	951	26	2000	4	1816	309	1586
9	58	2776	99	1712	200	3096	91	3097	64	3142	114	3075	98	3218	86	3394	1193	900	22	1960	4	1848	124	1595
10	515	1925	88	1887	207	3531	64	2594	66	3335	107	3135	88	3085	77	3316	1566	578	21	1916	3	1832	116	1281
11	555	1667	81	2119	194	2727	57	2587	63	3111	101	3191	84	3140	66	3298	2387	430	16	1920	3	1877	78	846
12	259	1479	77	2325	155	2629	51	2809	62	3058	98	3527	154	2698	57	3400	2154	430	14	1985	3	1901	56	773
13	321	1440	73	2599	100	2360	46	2596	64	3069	87	3202	180	1774	50	3466	779	647	14	2054	2	2050	42	750
14	226	1239	73	2683	146	2399	43	3110	64	3105	78	3157	148	1757	43	3689	391	887	13	2100	1	2100	31	794
15	148	1308	235	1516	153	2792	36	4631	66	3068	74	3212	118	1887	38	3625	261	1148	11	2153	1	2144	149	1493
16	107	1546	239	925	816	1934	31	3316	72	3208	72	3337	93	2092	36	3688	189	1345	10	2186	1	2200	230	1953
17	88	1944	369	1322	923	1141	28	2721	69	3362	69	3394	93	2332	35	3975	152	1511	10	2175	1	2251	107	1203
18	77	2347	322	887	960	1013	28	2357	67	3302	67	3369	147	4304	32	4069	130	1786	9	2199	1	2380	115	1019
19	68	2701	224	948	739	940	28	2263	77	3052	68	3503	146	2300	32	4225	117	1962	9	2200	1	2385	78	797
20	62	2812	169	1204	448	1049	42	2086	67	3157	360	2410	130	1923	29	4161	106	2273	34	1181	1	2423	55	800
21	58	2919	192	1241	303	1343	95	2405	91	3453	513	2729	98	1965	28	4093	97	2065	27	1777	1	2424	41	840
22	54	3218	1584	1224	248	1717	92	2510	90	4153	477	1523	312	1849	24	3838	89	1969	12	2905	1	2510	31	950
23	50	3456	1351	706	209	1926	81	2949	85	3437	341	1347	1960	1298	23	4042	81	2019	16	2414	1	2621	32	1118
24	49	3675	945	745	168	1987	93	3334	103	3690	275	1469	1308	1206	27	4279	92	2296	16	1947	1	2595	37	1105
25	49	3908	582	880	152	2072	102	3128	88	3599	366	2202	869	1178	150	5434	132	2220	41	2346	1	2558	90	1043
26	44	4011	353	1134	148	1972	125	3381	81	3027	256	1839	479	1483	87	2990	72	2502	78	4680	1	2635	54	2518
27	43	4061	265	1492	141	3862	136	2971	84	3033	200	2050	458	2284	269	2693	76	1962	26	3493	1	2695	29	3853
28	51	3949	205	1747	131	2553	126	2474	61	2753	164	1956	631	1631	144	2010	116	1716	75	1678	1	2700	19	2287
29	60	3619	170	2034	118	2447	112	2181			123	2338	919	957	484	1842	123	1434	81	2133	0	2748	15	1977
30	59	3541	152	2197	109	2398	101	2160			109	2625	1008	771	709	890	109	1324	36	3348	0	2881	14	1785
31	67	3277			112	2769	94	2317			105	2793			718	512			34	2569	2	2829		
Avg.	148	1924	315	1260	254	1859	81	2867	75	3130	182	2354	343	1638	158	1934	666	745	32	2312	6	1874	71	1491

DAILY FLOW AND CONTINUOUS RECORDED QUALITY DATA

PHS Station No.: 763
Location: Salt Creek of Little River near
Water Year: 1961 DeWright, Oklahoma

Basin: Arkansas River
Tributary to: Little River
Remarks: Records fair.
Stratification nil.

Equations Used to Compute Constituents--
Chlorides: Cl =0.3610 Sp. C.
Sulfates: SO_4=0.0084 Sp. C.
Dissolved Solids: DS =0.5911 Sp. C.

Discharge (cfs) and Specific Conductance, Micromhos/cm (µmhos)

Day	October		November		December		January		February		March		April		May		June		July		August		September	
	cfs	µmhos	cfs	µmhos	cfs	µmhos	cfs	µmhos	cfs	µmhos	cfs	µmhos	cfs	µmhos	cfs	µmhos	cfs	µmhos	cfs	µmhos	cfs	µmhos	cfs	µmhos
1	6	5026	16	3160	7	8774	322	1207	26	5500	22	7322	548	1518	25	6634	21	6516	12	6876	11	3994	11	6135
2	6	5487	15	4897	8	8701	114	2469	20	6000	20	7093	287	2351	23	6612	20	6693	11	6933	10	4442	9	5998
3	6	5976	12	6472	8	9027	53	3712	16	6368	20	7316	214	2982	23	6500	20	6810	12	7596	9	4582	23	4576
4	6	6622	11	6825	15	7784	43	5029	15	6574	20	7847	136	3313	290	2828	22	7006	12	8244	8	4840	598	2318
5	6	7903	12	7268	111	5988	41	5732	17	6955	26	6346	106	3737	2341	764	36	7595	10	8914	7	4982	180	1440
6	5	9558	10	7698	515	2707	37	5849	22	7306	238	2764	85	4012	252	1803	24	5457	9	8088	14	5324	54	1846
7	4	10358	10	8026	336	1675	34	6160	26	6970	43	2325	72	4364	178	2486	221	5042	515	2700	10	7200	32	2583
8	4	11205	11	8127	209	1199	30	6305	28	6917	31	3571	84	4532	220	2777	522	2162	82	2900	7	6300	24	3393
9	6	11912	12	8451	46	2458	26	6393	25	6400	29	4275	369	2067	91	2931	108	1392	25	3000	6	5600	20	4338
10	4	12413	10	8750	663	1011	27	7048	24	6201	19	4774	102	2806	59	3415	56	2312	18	3161	5	5500	18	5017
11	4	12476	10	8750	841	784	27	7087	20	5845	21	5451	81	3952	47	4245	49	2918	14	3619	5	5500	16	4930
12	4	10567	10	8750	209	1433	25	6903	18	6317	22	5700	78	3935	42	5096	47	3608	16	4410	5	5500	316	1999
13	6	8500	10	8750	80	2416	25	7206	17	6400	19	7114	57	4520	40	5664	46	4174	16	4778	5	5500	2078	550
14	34	8175	11	8966	55	3955	25	7275	15	6676	18	7289	52	5138	36	6222	887	1061	342	3022	9	5600	554	825
15	10	7360	11	9125	46	4748	24	7118	15	7615	18	7621	52	5051	32	6606	570	961	272	986	9	6613	229	1500
16	5	7078	11	9001	35	5144	22	6597	16	7537	18	7440	46	5512	48	5330	206	1406	54	1625	1260	804	127	1992
17	4	6662	10	9022	32	5639	21	6836	54	4133	23	7255	41	5214	138	3831	110	2014	23	2641	386	904	78	2440
18	207	4875	9	8396	31	6151	21	7025	142	3100	34	7129	39	5337	66	2148	69	2627	16	3314	136	1306	55	3064
19	488	1912	8	7356	29	6496	20	6760	27	4800	29	5881	39	5500	33	2520	47	3293	14	3898	75	1611	44	3817
20	92	2800	8	7626	28	6627	17	6684	23	5300	25	5459	37	5649	75	4218	36	3648	13	4472	51	1987	38	4172
21	30	3500	9	8748	21	6606	15	6639	36	6629	25	5978	36	5800	378	4529	29	4270	152	2598	37	2600	34	3800
22	17	4000	9	9025	19	6625	17	7701	36	5960	22	6025	34	5788	489	1393	25	4843	329	750	34	3000	31	3400
23	13	4500	9	8751	21	7908	21	8712	30	5532	19	6024	34	5713	146	1592	21	5357	640	700	30	3600	28	3000
24	11	4800	8	8750	25	8098	18	7438	24	5825	18	6211	34	5886	62	2490	18	5631	207	1100	24	4100	25	2500
25	108	4000	9	8975	23	6775	13	7041	25	6368	65	4000	31	6051	38	3498	75	2463	94	1721	20	4500	25	2350
26	65	4700	9	9101	21	6970	11	7493	23	6980	426	2350	27	5956	82	3350	32	6520	50	2145	18	4800	23	3400
27	17	5477	9	9200	20	6936	10	7370	23	6519	137	2700	28	6330	33	3292	20	5820	33	2424	16	5300	23	2400
28	85	6512	9	9205	22	7206	10	9240	24	6979	64	3199	26	6483	27	4309	16	5360	25	2843	14	5800	176	2200
29	46	1854	8	9052	34	6638	13	10041			644	1303	24	6337	24	5252	15	6178	20	3171	13	5800	51	2600
30	46	3005	7	9025	102	4234	16	8000			3909	587	24	6525	23	5943	13	6665	16	3522	12	5800	39	2800
31	26	3183			458	3223	21	6000			2317	696			22	6218			13	3795	12	5914		
Avg.	67	4049	10	7967	131	2607	36	4600	28	5614	269	1258	94	3327	174	2081	113	2274	131	1493	73	1693	165	1633

DAILY FLOW AND CONTINUOUS RECORDED QUALITY DATA

PHS Station No.: 366
Location: Little River near Tecumseh, Oklahoma
Water Year: 1961

Basin: Arkansas River
Tributary to: South Canadian River
Remarks: Records very good. Occasional minor stratification.

Equations Used to Compute Constituents--
Chlorides: Cl =0.1620 Sp. C,
Sulfates: SO_4=0.0666 Sp. C,
Dissolved Solids: DS =0.5700 Sp. C,

Discharge (cfs) and Specific Conductance, Micromhos/cm (μmhos)

Day	October		November		December		January		February		March		April		May		June		July		August		September	
	cfs	μmhos	cfs	μmhos	cfs	μmhos	cfs	μmhos	cfs	μmhos	cfs	μmhos	cfs	μmhos	cfs	μmhos	cfs	μmhos	cfs	μmhos	cfs	μmhos	cfs	μmhos
1	19	1108	53	619	26	980	187	564	98	810	66	880	297	464	42	977								
2	19	1174	41	719	26	995	120	624	59	820	60	883	217	599	43	978								
3	19	1220	34	785	27	1008	80	707	55	820	58	888	173	718	45	976								
4	21	1117	30	848	102	586	65	822	47	837	55	885	135	735	87	924								
5	22	1159	28	899	155	447	56	875	54	858	191	532	102	795	81	873								
6	19	1185	26	925	107	653	53	890	69	852	218	516	91	830	92	850								
7	19	1191	27	926	105	717	52	908	77	876	86	627	82	850	346	687								
8	18	1200	28	957	103	624	47	900	74	830	64	815	275	523	334	685								
9	18	1226	28	984	59	678	43	909	78	873	52	861	291	524	113	515								
10	18	1240	26	953	484	353	45	951	78	829	50	896	204	658	68	727								
11	18	1245	25	971	482	366	45	938	67	831	51	921	142	785	52	868								
12	18	1246	26	1014	268	537	45	935	55	867	51	925	107	854	43	920								
13	19	1246	28	1025	167	679	47	942	48	888	48	930	88	874	45	899								
14	20	1187	29	1002	99	600	50	948	44	912	45	925	80	898	73	931								
15	20	1192	32	960	83	627	49	933	42	938	45	925	77	898	41	925								
16	19	1103	59	898	68	723	46	920	42	936	44	925	74	900	35	955								
17	19	1129	42	723	61	776	46	920	388	361	54	933	92	909	1284	297								
18	916	258	34	783	58	825	45	930	698	300	111	866	65	918	388	275								
19	265	292	30	870	56	860	43	930	142	407	99	723	62	918	132	521								
20	113	423	30	920	53	877	40	930	146	405	94	785	61	908	76	635								
21	49	479	29	969	47	887	33	940	232	522	138	733	57	900	678	262								
22	33	629	30	1005	45	928	36	940	171	663	85	727	56	905	1176	228								
23	28	764	28	984	42	935	43	945	130	726	57	844	54	905	188	398								
24	25	826	28	986	41	915	42	919	96	793	46	912	53	929	73	665								
25	27	860	28	994	48	902	32	986	82	859	60	938	49	935	91	639								
26	30	880	28	991	48	900	34	1107	75	865	150	773	46	936	136	550								
27	36	900	30	971	46	900	37	1058	71	860	104	744	45	948	56	768								
28	136	632	30	937	48	900	42	1070	73	877	68	792	42	950	48	863								
29	67	382	27	938	59	950	46	1011			347	416	40	950	43	908								
30	203	419	27	963	59	910	48	903			1314	276	41	956	39	940								
31	75	581			172	700	52	818			925	345			36	957								
Avg.	75	695	31	896	104	589	53	858	116	606	156	529	106	731	193	439								

DAILY FLOW AND CONTINUOUS RECORDED QUALITY DATA

PMS Station No.: 838
Location: Canadian River at Purcell, Oklahoma
Water Year: 1961

Basin: Arkansas River
Tributary to: Arkansas River
Remarks: Records poor. Occasional minor stratification.

Equations Used to Compute Constituents--
Chlorides: Cl =0.1529 Sp. C.
Sulfates: SO_4=0.2168 Sp. C.
Dissolved Solids: DS =0.6762 Sp. C.

Discharge (cfs) and Specific Conductance, Micromhos/cm (umhos)

Day	October		November		December		January		February		March		April		May		June		July		August		September	
	cfs	umhos	cfs	umhos	cfs	umhos	cfs	umhos	cfs	umhos	cfs	umhos	cfs	umhos	cfs	umhos	cfs	umhos	cfs	umhos	cfs	umhos	cfs	umhos
1	2240	950	286	926	91	1450	1896	1449	277	1775	320	1831	1163	1100	16	1350								
2	1889	1000	285	1121	70	1470	1509	1506	250	1800	395	1850	2308	1600	23	1322								
3	982	1150	283	1162	96	1591	825	1552	302	1722	535	1895	1644	1800	69	1371								
4	682	1250	252	1224	305	1416	266	1588	340	1656	533	2016	1301	1675	91	1204								
5	361	1300	191	1274	493	970	287	1613	373	1509	387	2047	891	1600	97	1124								
6	194	1350	165	1300	264	1182	292	1625	334	1615	308	2014	999	1350	100	1096								
7	247	1400	157	1346	220	1269	281	1684	256	1394	271	2000	450	1350	1992	1516								
8	125	1375	128	1431	191	1179	287	1612	177	1393	309	2000	404	1400	1299	1261								
9	77	1350	116	1361	116	1310	298	1600	186	1423	325	2000	541	1550	1031	1698								
10	25	1275	149	986	238	1098	262	1600	225	1474	324	2000	513	1670	1003	1775								
11	21	1262	157	1359	816	921	241	1659	298	1530	304	2025	645	1500	225	1821								
12	22	1300	134	1500	623	1017	247	1700	455	1590	275	2053	521	1375	141	1870								
13	2505	800	131	1500	550	1174	293	1713	852	1621	266	2000	492	1750	119	1875								
14	1209	875	135	1507	487	1249	279	1764	1096	1700	155	1911	536	1750	91	1800								
15	1188	850	146	1464	783	1300	334	1744	983	1747	114	1810	218	1900	39	1800								
16	525	900	175	1392	1636	1398	491	1775	814	1700	133	1792	150	1866	19	1750								
17	424	750	157	1469	1268	1586	521	1800	716	1700	216	1651	228	1800	370	863								
18	2274	650	147	1500	909	1600	681	1763	586	1700	348	1592	144	1800	123	558								
19	11703	525	143	1500	713	1652	400	1770	453	1700	395	1503	174	1775	66	1017								
20	3740	700	146	1475	616	1662	288	1784	388	1700	693	1395	171	1750	20	1288								
21	5088	600	147	1481	829	1650	285	1862	426	1700	1140	1474	166	1750	340	1000								
22	8299	550	146	1500	432	1650	359	1837	456	1700	1931	1791	92	1750	797	951								
23	3445	850	126	1518	604	1711	414	1800	447	1725	1846	1925	77	1750	507	1042								
24	2609	950	110	1525	1765	1700	363	1825	322	1750	1061	1950	69	1750	92	1052								
25	1840	1000	108	1550	2093	1738	259	1950	385	1775	1028	1975	58	1800	122	1062								
26	2235	968	109	1600	2030	1741	200	1850	503	1800	898	2000	48	1200	206	982								
27	1683	819	113	1600	1365	1722	330	1900	653	1825	899	2000	46	1150	90	1032								
28	2344	850	121	1600	1771	1762	106	1950	426	1855	774	1925	41	1250	51	1150								
29	2515	608	105	1600	1774	1706	96	2000			1089	1826	28	1300	35	1050								
30	454	565	84	1600	1829	1703	141	1800			1228	1000	23	1350	17	950								
31	334	698			2019	1549	367	1700			1000	975			5	875								
Avg.	1972	732	155	1363	876	1563	404	1659	463	1682	628	1763	471	1561	297	1367								

DAILY FLOW AND CONTINUOUS RECORDED QUALITY DATA

PMS Station No.: 364
Location: Canadian River at Bridgeport, Oklahoma
Water Year: 1961

Basin: Arkansas River
Tributary to: Arkansas River
Remarks: Records poor. Occasional minor stratification.

Equations Used to Compute Constituents--
Chlorides: Log Cl =2.2876 Log Sp.C.-3.1002
Sulfates: SO_4=0.1760 Sp. C. - 126
Dissolved Solids: DS =0.6763 Sp. C.

Discharge (cfs) and Specific Conductance, Micromhos/cm (μmhos)

Day	October		November		December		January		February		March		April		May		June		July		August		September	
	cfs	μmhos	cfs	μmhos	cfs	μmhos	cfs	μmhos	cfs	μmhos	cfs	μmhos	cfs	μmhos	cfs	μmhos	cfs	μmhos	cfs	μmhos	cfs	μmhos	cfs	μmhos
1	264	1800	98	1500	107	1700	201	1850	138	1627	596	1718	1178	1563	30	1314	18	1030	16	1350	22	2150	13	1210
2	203	1100	145	1400	106	1700	169	1850	140	1700	699	2090	1078	1690	31	1310	25	578	12	1350	17	2090	12	1146
3	167	1135	184	1400	101	1700	216	1850	110	1729	458	2085	1026	1705	43	1418	1298	822	18	1350	56	1990	15	789
4	234	1300	169	1400	103	1700	235	1855	112	1740	376	2070	1083	1687	57	1418	901	863	19	1350	261	1370	12	711
5	215	1090	157	1450	118	1650	250	1865	417	1740	439	2060	822	1552	1830	873	3477	967	20	1323	79	1070	17	802
6	193	1500	156	1450	113	1700	278	1875	372	1740	423	2051	269	1622	926	1108	2321	1173	22	1329	72	1200	16	1069
7	112	1700	158	1450	115	1800	233	1885	361	1740	481	2020	159	1786	1727	1927	2372	1007	24	1328	69	1350	17	1066
8	96	1700	155	1450	109	2250	202	1895	371	1738	494	2045	166	1800	1032	2200	1225	762	27	1260	36	1180	19	1032
9	84	1700	149	1600	106	2200	196	1903	257	1655	439	2035	375	1830	505	1700	3156	1105	30	1230	24	1320	17	1065
10	78	1700	151	1600	156	1750	198	1925	206	1580	374	2025	409	1900	306	1830	4211	1154	40	1387	16	1370	14	1092
11	913	1585	126	1600	219	1600	250	1951	281	1580	319	2019	392	1830	209	2000	2671	515	33	1336	16	1400	14	1092
12	5184	1100	126	1700	215	1600	239	1979	2033	1580	301	2010	440	1800	120	2200	936	735	45	1181	92	1380	768	550
13	1022	1100	126	1800	227	1695	246	2005	1457	1627	285	1987	329	1830	67	2360	283	543	45	1115	91	1350	1565	616
14	1383	1050	128	1850	344	1700	269	2034	593	1640	231	1808	250	1890	52	2600	2253	1235	68	1120	53	2220	516	1231
15	215	1031	127	1875	783	1826	256	2059	335	1640	191	1504	226	1890	63	2660	2390	1006	1712	2170	38	1970	176	1424
16	200	1021	129	1875	362	1741	233	2080	276	1640	178	1478	155	1890	31	2450	352	984	1162	2081	76	1770	110	1443
17	146	1100	128	1875	253	1851	228	2100	153	1640	259	1486	134	1820	25	2500	152	1052	307	1851	15	1720	131	1825
18	10659	1061	123	1875	207	1867	187	2180	105	1640	489	1408	135	1830	115	1455	96	1144	636	1384	11	1890	110	1938
19	3336	1160	120	1875	215	1900	168	2200	78	1640	566	1395	110	1838	117	1499	81	1268	1557	1365	1060	710	100	1915
20	3611	1252	120	1875	234	2000	115	2300	74	1739	1162	1980	84	1878	116	1705	53	1387	574	1063	1621	995	279	1445
21	15977	1250	122	1875	250	2000	96	2250	86	1900	1932	1980	73	1818	100	1590	40	1463	189	1060	487	1060	176	1893
22	7329	1250	121	1875	300	2000	127	2000	71	1908	960	2100	62	1733	72	1510	43	1470	344	1070	866	1910	119	1324
23	3844	1250	123	1875	371	2000	136	1800	105	1932	314	2030	56	1514	61	1620	52	1459	244	1078	624	2010	1892	419
24	2549	1250	120	1875	393	2000	109	1800	256	1661	267	1967	45	1630	30	1596	50	1407	83	1550	50	2005	3059	463
25	3325	1250	106	1800	681	2000	109	1700	309	1141	618	1900	46	1696	27	1430	60	1244	75	1580	36	1863	680	199
26	2177	1200	106	1800	421	2000	134	7178	381	1290	489	2015	36	1827	26	1413	120	783	72	1640	35	1938	325	967
27	726	1450	102	1800	585	1901	126	2260	344	1290	634	2022	39	1581	34	1481	31	1007	69	1780	32	1920	250	1060
28	1378	1050	115	1700	451	1932	102	2240	311	1031	578	1866	27	1475	28	1508	21	1302	66	1920	30	1940	392	1239
29	293	1100	118	1700	536	1837	92	2300			397	1825	32	1399	24	1492	16	1350	59	2160	28	1910	302	1778
30	181	1100	120	1700	329	1850	103	2100			339	1329	33	1333	19	1292	15	1350	53	2190	24	1920	256	1856
31	1153	1100			242	1850	149	1700			887	1357			17	12451			42	22000	16	1930		
Avg	2164	1195	130	1675	289	1862	182	1987	351	1583	515	1840	304	1649	255	1570	953	991	248	1645	182	1285	373	790

DAILY FLOW AND CONTINUOUS RECORDED QUALITY DATA

PHS Station No.: 366
Location: Canadian River at Bridgeport, Oklahoma
Water Year: 1962

Basin: Arkansas River
Tributary to: Arkansas River
Remarks: Records poor. Occasional minor stratification.

Equations Used to Compute Constituents--
Chlorides: Log Cl =2.2876 Log Sp.C.-5.1002
Sulfates: SO_4=0.1769 Sp. C. + 126
Dissolved Solids: DS =0.6763 Sp. C.

Discharge (cfs) and Specific Conductance, Micromhos/cm (µmhos)

Day	October cfs	October µmhos	November cfs	November µmhos	December cfs	December µmhos	January cfs	January µmhos	February cfs	February µmhos	March cfs	March µmhos
1	106	1761	363	610	361	2053	166	1900	343	1809	65	1888
2	105	1723	16055	610	232	2050	125	1967	185	1666	60	1735
3	106	1711	2868	615	235	1926	116	1996	151	1646	56	1766
4	60	1590	306	620	238	1908	115	2000	130	1554	60	1766
5	62	1600	220	613	283	1834	116	2000	111	1733	59	1810
6	61	1600	180	877	385	1852	119	1956	101	2000	57	1785
7	55	1530	178	1316	396	1901	121	1792	99	2000	56	1712
8	49	1383	404	1669	363	1900	128	1750	95	2000	55	1688
9	396	1043	488	1600	403	1899	119	1837	90	2000	54	1688
10	3891	384	376	1700	359	1859	81	2211	86	2025	62	1724
11	150	600	328	1900	268	1806	75	2638	84	2000	53	1848
12	58	1600	366	2000	260	2061	75	2626	81	1981	50	1888
13	1646	800	404	2000	260	2130	77	2178	80	1950	52	1803
14	286	1600	397	1937	260	2269	86	2150	87	1956	52	1700
15	76	1700	920	1273	271	1973	76	2056	92	1830	52	1600
16	56	1800	1159	1320	320	1800	71	1783	80	1796	59	1550
17	53	1600	794	1566	304	1677	73	1700	77	1800	58	1527
18	67	1268	1126	1797	432	1605	66	1700	68	1800	56	1539
19	62	1265	1763	1976	311	1676	69	1650	69	1892	53	1486
20	63	1224	988	2000	220	1712	58	1600	74	1814	58	1500
21	52	1186	555	2135	262	1700	71	1600	75	1759	52	1600
22	68	1190	626	2150	866	1807	88	1598	76	1766	50	1600
23	66	1179	328	2080	610	1780	80	1550	71	1750	47	1600
24	62	1223	637	2000	316	1793	75	1550	75	1750	43	1600
25	61	1263	700	2215	236	1832	81	1500	78	1770	43	1600
26	61	1280	577	2225	186	1850	99	1505	75	1750	44	1600
27	61	1350	539	2165	188	1890	110	1563	76	1768	42	1600
28	61	1327	679	2153	163	1880	138	1550	70	1908	37	1570
29	60	1300	364	2133	170	1911	484	1590			28	1586
30	61	1082	315	2100	176	1900	976	1726			29	1530
31	264	588			188	1900	830	1854			29	1502
Avg.	259	762	1180	1164	306	1857	160	1795	99	1822	51	1663

Day	April cfs	April µmhos	May cfs	May µmhos	June cfs	June µmhos	July cfs	July µmhos	August cfs	August µmhos	September cfs	September µmhos
1	26	1488	161	2100	35	1010	60	1600	25371	1405	19	1262
2	27	1493	126	2078	53	785	49	1600	13369	1580	21	1231
3	28	1523	96	1887	156	868	32	1500	14462	1500	1271	1196
4	32	1471	803	808	52	797	25	1652	7078	1400	190	974
5	41	1371	167	792	28	749	27	1360	3250	1550	98	772
6	53	1360	59	1067	29	806	26	1350	1238	1700	70	842
7	75	1696	39	1263	51	911	23	1350	875	1800	111	661
8	86	1339	25	1368	210	600	23	1300	608	1825	287	398
9	99	1729	21	1365	8888	250	34	985	390	1900	226	294
10	148	1568	20	1335	2290	450	433	565	317	1925	81	420
11	230	1393	20	1313	2035	600	31	278	216	1950	56	434
12	159	1635	20	1284	1995	1280	19	796	156	1900	39	380
13	135	1509	20	1215	598	898	16	857	121	1900	36	601
14	156	1595	22	1360	255	1080	16	916	113	1900	37	832
15	282	2152	26	1313	191	1131	17	1000	99	1900	63	816
16	259	2642	26	1251	157	1100	17	1022	80	1900	50	437
17	189	2871	25	1291	118	967	16	1022	61	1900	7288	806
18	206	2673	25	1267	89	963	16	1000	50	1905	1565	539
19	173	2486	26	1296	86	1196	16	1000	40	1600	259	597
20	125	2205	25	1189	77	1200	17	1005	30	1550	169	600
21	95	2016	27	1182	76	1206	35	828	21	1550	2087	1300
22	85	1813	25	1291	1175	1000	15	850	18	1200	1038	1300
23	80	1698	29	1653	3388	800	13	990	15	1200	839	1250
24	75	1591	27	1737	2275	1000	136	670	15	1088	558	1250
25	71	1478	26	1705	925	1400	33	700	16	1021	220	1350
26	68	1500	165	1316	783	1400	28	850	16	980	194	1400
27	273	1200	99	910	780	1500	18	1000	16	979	159	1600
28	180	1300	65	888	236	1700	16	1300	16	986	109	1600
29	163	1900	30	1122	109	1700	167	2000	16	1165	80	1500
30	158	2010	28	1150	73	1900	1223	1300	16	1310	35	1500
31			25	1136			1046	1180	17	1282		
Avg.	125	1849	72	1174	907	723	117	1154	1786	1511	569	937

DAILY FLOW AND CONTINUOUS RECORDED QUALITY DATA

USGS Station No.: 345
Location: Canadian River near Canadian, Texas
Water Year: 1961

Basin: Arkansas River
Tributary to: Arkansas River
Remarks: Records poor. Occasional minor stratification.

Equations Used to Compute Constituents--
Chlorides: Log Cl = 1.6435 Log Sp.C. - 2.1961
Sulfates: SO_4 = 0.1275 Sp. C.
Dissolved Solids: DS = 0.4167 Sp. C.

Discharge (cfs) and Specific Conductance, Micromhos/cm (mhos)

Day	October		November		December		January		February		March		April		May		June		July		August		September	
	cfs	mhos	cfs	mhos	cfs	mhos	cfs	mhos	cfs	mhos	cfs	mhos	cfs	mhos	cfs	mhos	cfs	mhos	cfs	mhos	cfs	mhos	cfs	mhos
1	309	1500	156	1730	44	2330	108	2200	46	2300	376	1800	1227	1697	139	2800	3	1650	10	3500			-	-
2	284	1600	152	1760	50	2490	79	2300	41	2300	319	1607	398	1957	37	2661	367	1500	8	3500			-	-
3	284	1650	119	1809	56	2530	116	2200	41	2300	216	1672	372	2026	24	2560	429	1600	1	4131			0	2850
4	282	1700	80	1876	57	2550	173	2200	32	2233	250	1730	335	2083	1411	1050	2039	650	-	-			2	1939
5	268	1810	77	1949	59	2543	217	2233	30	2263	198	1716	226	1946	775	1460	365	1600	-	-	-	-	8	1918
6	239	1898	56	2000	56	2543	136	2263	31	2263	186	1743	263	1928	132	2000	370	1600	-	-	-	-	14	1871
7	196	2000	53	2022	55	2572	73	2176	16	2270	226	1786	335	1967	92	2274	4755	350	12	3500	-	-	69	1599
8	126	2075	75	2186	76	2578	87	2285	26	2265	279	1950	241	2088	135	2180	3729	600	106	3450	-	-	344	1631
9	113	2091	83	2263	59	2606	103	2350	80	1800	136	2006	180	1332	124	2298	1060	1900	33	3500	-	-	210	1741
10	95	2078	68	2283	51	2165	97	2350	169	1600	196	2000	245	2191	60	2567	388	2700	665	2963	-	-	208	1719
11	209	1709	108	2358	175	2027	91	2293	92	1200	276	1950	165	2593	23	2530	353	2700	1178	1055	-	-	266	1630
12	253	1726	118	2385	635	2165	73	2263	49	1950	263	2000	197	2596	9	2850	65	2622	1350	1638	-0	-	363	1752
13	283	1793	78	2378	138	2130	98	2280	53	1900	319	1900	278	2672	2	3000	25	2165	4533	1563	6	1200	422	1733
14	289	2116	66	2061	158	2600	98	2268	66	1980	439	2200	226	2500	-	-	12	2276	675	755	7	1050	191	1880
15	324	1974	71	2098	168	2600	76	2285	60	2250	432	2200	130	2550	-	-	6	1970	481	876	5	752	320	1813
16	331	1645	64	1728	213	2600	53	2300	60	2250	387	2050	90	2600	-	-	9	1252	1467	1553	37	980	693	1803
17	423	1553	55	1587	203	2600	53	2198	57	2280	1907	1590	126	2500	-	-	7	1178	770	1006	476	1500	436	1665
18	1640	1284	60	1572	125	2600	47	2260	53	2223	1213	1550	111	2500	-	-	7	1822	233	1785	319	1650	236	1831
19	9930	900	58	1609	117	2600	25	2280	70	2280	622	1900	107	2650	-	-	10	2422	317	1539	1059	1550	166	1553
20	10829	952	36	1608	107	2600	15	2344	90	2300	516	1950	77	2700	-	-	6	2555	221	1693	1703	1500	135	1510
21	5222	985	45	1600	128	2600	13	2533	84	1793	727	2200	59	2800	-	-	1	2240	274	1630	500	1366	133	1733
22	3393	985	44	1588	164	2550	28	2365	91	1922	970	2100	42	2900	-	-	-	-	727	1636	393	1799	84	1861
23	881	1095	33	2045	188	2550	39	2337	119	1635	855	2150	34	2900	-	-	-	-	486	1728	118	1915	620	2012
24	843	1180	36	2087	163	2550	37	2353	486	1201	1368	1600	33	2800	-	-	-	-	358	1571	61	1760	366	1650
25	488	1336	44	2138	106	2550	29	2329	331	1022	1110	1650	36	2800	-	-	-	-	175	1569	42	1685	483	1605
26	253	1262	56	2285	98	2550	17	2270	380	1830	639	2000	33	2750	-	-	-	-	35	1651	28	1393	259	1525
27	161	1286	93	2303	173	2550	16	2288	449	1872	749	2000	67	2700	-	-	37	2800	773	1835	5	-	179	1679
28	135	1335	85	2448	251	2550	25	2461	326	1871	710	2000	56	2600	-	-	29	2850	107	1736	-	-	160	1698
29	122	1532	68	2511	283	2550	32	2307			371	2000	60	2600	-	-	32	2800	33	1851	-	-	162	1565
30	183	1394	90	2519	286	2550	56	2317			277	1800	116	2500	10	2800	19	2850	11	1928	-	-	138	1673
31	162	1661			267	2452	72	2300			1933	1200			10	2800			7	2111	-	-		
Avg.	1305	825	72	2062	134	2446	71	2289	122	1729	583	1786	195	2077	51	1491	469	835	458	1500	180	1489	241	1680

DAILY FLOW AND CONTINUOUS RECORDED QUALITY DATA

PWB Station No.: 3-3
Location: Canadian River near Canadian, Texas
Water Year: 1962

Basin: Arkansas River
Tributary to: Arkansas River
Remarks: Records poor. Occasional minor stratification.

Equations Used to Compute Constituents--
Chlorides: Log Cl =1.6435 Log Sp.C.-2.1963
Sulfates: SO4=0.1275 Sp. C.
Dissolved Solids: DS =0.6567 Sp. C.

Discharge (cfs) and Specific Conductance, Micromhos/cm (µmhos)

Day	October		November		December		January		February		March		April		May		June		July		August		September	
	cfs	µmhos	cfs	µmhos	cfs	µmhos	cfs	µmhos	cfs	µmhos	cfs	µmhos	cfs	µmhos	cfs	µmhos	cfs	µmhos	cfs	µmhos	cfs	µmhos	cfs	µmhos
1	103	3700	174	1571	206	2500	136	2353	166	2298	14	2449	-	-	8	2226	-	-	347	2641	14655	392	0	0
2	85	1736	163	2233	316	2350	134	2358	92	2303	27	2278	-	-	3	2200	-	-	179	2685	3403	6000	0	0
3	79	1788	428	2831	333	2340	108	2385	87	2345	47	2265	-	-	.2	2200	-	-	83	2981	3988	13000	0	0
4	58	1855	178	2300	922	2300	118	2500	92	2268	53	2295	-	-	-	-	-	-	50	3054	1761	17000	0	0
5	43	1973	122	2534	1056	2201	123	2353	106	2363	46	2359	7	2510	-	-	9	873	34	3200	634	1900	0	0
6	30	2080	90	2306	1238	2215	111	2487	103	2383	35	2463	173	3570	-	-	10	1038	6	3100	343	20000	0	0
7	21	2053	72	2269	1447	2223	126	2322	152	2477	30	2527	254	3623	-	-	39	538	1	3100	296	22000	10	1223
8	18	1579	71	2215	622	2176	125	2292	258	2484	30	2745	132	3470	-	-	3	1628	-	-	275	22500	56	3316
9	134	1674	88	2260	123	2157	82	2324	139	2315	31	2538	138	3.30	-	-	19	502	-	-	179	23300	40	2822
10	101	1392	88	2208	94	2263	66	2263	120	2300	22	2620	100	3477	-	-	8	1286	-	-	102	24000	93	2697
11	37	2172	39	2283	61	2384	33	2455	109	2487	20	2830	114	2757	-	-	2	1638	-	-	34	23500	70	2609
12	30	2259	30	2180	33	2620	61	2231	97	2300	17	3085	133	2814	-	-	-	-	-	-	34	23500	43	2300
13	10	2258	102	2099	61	2627	60	2077	97	2332	16	2928	227	2991	-	-	-	-	-	-	42	23000	29	2399
14	7	2396	77	2033	60	2557	76	2332	110	2203	13	2664	118	2997	-	-	-	-	-	-	124	23600	15	2677
15	6	2430	365	1533	80	2284	70	2063	164	2203	10	2599	67	3085	-	-	-	-	-	-	138	23600	11	2335
16	6	1930	779	1923	106	1873	61	2334	202	23000	9	2330	43	3095	-	-	-	-	-	-	128	23000	103	1169
17	61	1733	676	2335	104	1610	59	2561	203	2329	10	2331	28	2935	-	-	158	3318	-	-	187	22000	79	1382
18	3	1819	134	2473	507	1868	52	2733	146	2931	9	2231	17	2892	-	-	640	2358	-	-	93	24000	72	1750
19	1	1965	12	2268	377	2237	45	3303	70	2983	9	2200	10	2753	-	-	222	2533	-	-	28	22350	35	1500
20	0	1993	33	2368	373	2361	33	3682	48	2718	9	2336	1	2711	-	-	316	2729	-	-	6	22000	581	900
21			232	2309	290	2178	61	3676	40	2697	7	2395	-	-	-	-	340	2852	-	-	2	21950	41	1015
22			330	2184	279	2257	60	3397	49	2733	3	2503	-	-	-	-	70	2539	-	-	1	1850	28	2729
23			176	2166	157	2333	80	3183	70	2781	3	2140	-	-	-	-	33	1760	-	-	1	11337	28	3116
24			366	2147	121	2303	119	2963	73	2643	-	2349	-	-	-	-	29	1500	1116	1900	1	1034	28	2430
25			331	2148	101	2259	588	1300	66	2532	-	-	-	-	-	-	17	1158	2899	2000	1	700	36	2399
26			223	2102	86	2253	977	1673	61	2587	-	-	8	2250	-	-	-	-	751	2800	1	650	41	2410
27			168	2122	80	2234	675	1945	22	2533	-	-	133	1753	-	-	-	-	12	2200	1	300	93	2531
28			116	2202	80	2232	581	2260	15	2569	-	-	118	2134	-	-	-	-	-	-	1	300	93	2578
29			171	2209	105	2536	479	2225			-	-	60	2308	-	-	538	2223	1615	1650	1	300	76	2601
30	98	1878	196	2207	127	2370	153	2200			-	-	15	2209	-	-	927	4004	797	1600	1	300	72	2575
31	79	1442			116	2272	168	2225			-	-							1036	1626	.4	300		
Avg.	31	1828	205	2171	303	2267	178	2091	106	2660	15	2683	93	2835	.3	2210	113	3011	315	1819	983	787	57	1569

DAILY FLOW AND CONTINUOUS RECORDED QUALITY DATA

PHS Station No.: 7-2
Location: Canadian River near Amarillo, Texas
Water Year: 1961

Basin: Arkansas River
Tributary to: Arkansas River
Remarks: Records poor. Occasional minor stratification.

Equations Used to Compute Constituents--
Chlorides: Log Cl = 1.4468 Log Sp.C. - 2.2616
Sulfates: SO_4 = 0.1819 Sp. C.
Dissolved Solids: DS = 0.6364 Sp. C.

Discharge (cfs) and Specific Conductance, Micromhos/cm (µmhos)

Day	October		November		December		January		February		March		April		May		June		July		August		September	
	cfs	µmhos	cfs	µmhos	cfs	µmhos	cfs	µmhos	cfs	µmhos	cfs	µmhos	cfs	µmhos	cfs	µmhos	cfs	µmhos	cfs	µmhos	cfs	µmhos	cfs	µmhos
1	115	1350	113	1790	36	2533	109	2010	92	2115	354	1205												
2	90	1650	97	1919	36	2626	101	2026	125	2084	438	1200												
3	79	1600	86	1974	36	2623	88	2079	111	2139	345	1200												
4	72	1760	71	2002	49	2441	93	2033	67	2180	309	1200												
5	66	1925	63	2039	55	2407	96	1999	65	2224	238	1236												
6	61	2100	59	2067	91	2283	92	2073	61	2627	269	1307												
7	57	2250	33	2112	86	2196	89	2056	81	2239	243	1328												
8	55	2400	37	2135	86	2168	82	2067	103	2021	225	1377												
9	50	2450	37	2163	119	2153	87	2058	126	1977	233	1383												
10	49	2423	37	2230	116	2172	93	2102	101	1932	289	1400												
11	38	2200	38	2231	169	2056	89	2130	75	1971	401	1606												
12	76	1800	32	2231	206	1876	84	2112	62	2059	376	1612												
13	192	1350	31	2263	383	1806	72	2116	67	2067	306	1622												
14	116	1350	30	2280	378	1769	56	2161	66	2031	350	1650												
15	203	1300	40	2325	326	1906	58	2166	67	2110	332	1696												
16	321	1180	41	2450	431	1963	52	2207	42	2087	172	1567												
17	832	800	42	2406	353	1939	59	2180	37	2029	407	1668												
18	3960	673	42	2311	333	1821	61	2273	32	2002	544	1633												
19	3133	500	42	2263	337	1762	57	2326	27	1998	660	1608												
20	1440	550	42	2322	283	1762	33	2306	29	2060	704	1339												
21	963	580	42	2309	223	1633	66	2347	281	1871	963	1250												
22	788	600	47	2280	171	1700	66	2272	433	1621	609	1300												
23	605	750	46	2297	169	1763	68	2283	567	1366	686	1650												
24	338	900	45	2359	171	1886	69	2286	264	1300	411	1600												
25	623	1100	43	2436	192	1903	62	2490	336	1250	871	1100												
26	505	1148	68	2568	166	1983	39	2549	490	1181	573	980												
27	286	1267	30	2600	162	1961	32	2632	477	1137	610	1210												
28	281	1368	46	2660	128	1965	33	2630	566	1181	786	1350												
29	233	1465	43	2379	111	2000	36	2690			331	1300												
30	181	1550	36	2588	102	2019	63	2671			163	1400												
31	139	1697			107	2036	37	2196			416	1300												
Avg.	784	1373	56	2191	181	1911	67	2176	187	1526	606	1316												

DAILY FLOW AND CONTINUOUSLY RECORDED QUALITY DATA

PRD Station No.: 3[illegible]
Location: Canadian River at Logan, New Mexico
Water Year: 1961

Basin: Arkansas River
Tributary to: Arkansas River
Remarks: Records poor, Stratification nil.

Equations Used to Compute Constituents--
Chlorides: Log Cl = 1.5970 Log Sp.C. - 2.7909
Sulfates: SO_4 = 0.2883 Sp. C.
Dissolved Solids: DS = 0.6584 Sp. C.

Discharge (cfs) and Specific Conductance, Micromhos/cm (µmhos)

Day	October		November		December		January		February		March		April		May		June		July		August		September	
	cfs	µmhos	cfs	µmhos	cfs	µmhos	cfs	µmhos	cfs	µmhos	cfs	µmhos	cfs	µmhos	cfs	µmhos	cfs	µmhos	cfs	µmhos	cfs	µmhos	cfs	µmhos
1	15	2193	28	2312	68	1746	80	1256	78	1366	296	761												
2	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]												
3	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]												
4	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]												
5	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]												
6	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]												
7	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]												
8	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]												
9	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]												
10	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]												
11	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]												
12	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]												
13	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]												
14	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]												
15	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]												
16	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]												
17	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]												
18	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]												
19	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]												
20	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]												
21	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]												
22	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]												
23	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]												
24	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]												
25	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]												
26	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]												
27	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]												
28	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]												
29	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]			[illegible]	[illegible]												
30	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]			[illegible]	[illegible]												
31	[illegible]	[illegible]			[illegible]	[illegible]	[illegible]	[illegible]			[illegible]	[illegible]												
Avg.	[illegible]	[illegible]	26	2307	86	1317	52	1480	286	889	187	992												

DAILY FLOW AND CONTINUOUS RECORDED QUALITY DATA

PHS Station No.: 283
Location: Verdigris River near Inola, Oklahoma
Water Year: 1961

Basin: Arkansas River
Tributary to: Arkansas River
Remarks: Records good. Occasional minor stratification.

Equations Used to Compute Constituents--
Chlorides: Log Cl =1.1843 Log Sp.C.-1.3380
Sulfates: SO_4=0.0101 Sp.C. + 33
Dissolved Solids: DS =0.5928 Sp.C.

Discharge (cfs) and Specific Conductance, Micromhos/cm (μmhos)

Day	October		November		December		January		February		March		April		May		June		July		August		September	
	cfs	μmhos	cfs	μmhos	cfs	μmhos	cfs	μmhos	cfs	μmhos	cfs	μmhos	cfs	μmhos	cfs	μmhos	cfs	μmhos	cfs	μmhos	cfs	μmhos	cfs	μmhos
1	20350	276	9651	533	12113	476	2410	700	7929	473	1935	802	4206	622	2499	778	387	1011	2383	627	273	744	156	1395
2	19663	280	18452	335	10950	479	2345	701	8018	490	1800	810	3201	646	4628	811	2685	712	1788	608	676	703	170	986
3	18838	280	26446	338	9855	484	2246	717	8055	579	1890	797	2508	674	2369	740	4365	892	1327	623	628	672	939	762
4	18250	289	32000	320	8970	471	2179	759	8301	685	1935	790	2103	681	1489	740	3908	869	801	647	399	884	1497	516
5	17463	302	31325	306	8305	468	2261	809	8578	724	1815	850	2070	704	1360	740	5479	840	631	668	334	1069	1306	783
6	13858	324	29750	233	7928	540	2465	804	8744	725	1635	895	1875	731	1218	740	5043	723	556	700	269	1066	897	932
7	7196	350	29025	207	7448	570	2543	813	8670	699	1508	935	1800	760	947	740	3515	595	454	705	221	1050	513	917
8	4115	408	27275	209	6456	585	3586	823	8358	640	1433	940	2108	808	771	740	5288	595	363	685	185	1013	1366	1158
9	2972	482	24125	246	6303	600	3231	830	6513	602	1426	940	2530	805	673	714	6033	560	304	716	164	986	1443	614
10	2086	516	17423	307	11215	520	2109	822	4179	622	1458	938	4840	621	615	723	13003	550	340	702	152	1007	6774	682
11	5326	501	13300	393	13433	480	2111	817	3024	642	1419	933	11917	499	556	777	12213	429	661	685	160	965	5843	471
12	10512	382	14313	375	11774	500	2008	841	2648	661	1368	900	9382	547	502	817	5903	471	2083	704	171	872	1505	475
13	10770	452	15025	347	7955	520	1903	849	2378	695	1355	894	5483	655	452	854	4610	526	1411	600	158	841	699	527
14	17083	403	15163	348	5953	550	2223	833	2456	732	1285	910	3784	723	392	879	4670	548	1640	644	136	867	445	547
15	20775	304	16333	400	6455	575	2421	803	2261	741	1392	905	2771	750	356	915	4920	550	1369	657	114	914	6333	344
16	18475	308	22063	410	8447	600	2131	807	2203	750	1495	913	2185	750	333	900	4940	544	1188	636	96	853	23565	290
17	14150	328	28650	430	18133	490	1812	799	2354	756	1495	923	1920	742	308	917	4352	521	994	629	89	852	27856	252
18	12454	390	29100	500	19550	440	1845	837	2515	841	1298	873	1684	729	282	921	2420	524	774	762	92	977	18125	321
19	13663	385	25200	550	15438	445	1655	827	2954	907	1085	844	1420	745	258	919	1387	546	670	820	88	944	5150	428
20	13375	385	21979	525	13500	450	1487	840	3415	868	1788	768	1273	750	243	900	1028	565	608	700	73	896	6107	454
21	10280	390	14583	400	11963	441	1610	835	3384	858	10567	602	1243	756	232	933	956	582	534	697	61	920	13067	281
22	7860	400	15440	420	9203	467	1617	830	3208	803	9698	635	1633	725	220	985	776	593	442	705	53	962	14700	326
23	4250	430	24735	410	7168	500	1660	884	3111	758	10103	769	4576	451	204	1020	710	590	350	730	46	997	13525	298
24	2564	480	25000	400	5815	510	1585	921	2875	752	9787	701	2552	608	200	980	843	640	290	758	52	1048	16300	311
25	2557	540	17694	440	4925	543	1738	920	2683	753	12452	501	1647	732	207	1000	831	642	267	748	55	1027	14983	367
26	2837	590	9995	500	4320	584	3007	867	2426	787	19233	463	1363	799	193	990	733	667	215	727	54	1087	11094	350
27	1830	634	9496	510	3858	614	5082	859	2365	835	15492	552	1223	757	173	975	708	693	175	785	53	1160	8788	357
28	1689	556	11300	430	3578	639	8193	838	2185	813	11087	609	1212	798	171	1010	665	664	167	824	51	1224	9063	345
29	1574	624	11988	470	3385	664	11718	735			8743	632	3663	862	204	1020	658	684	172	778	50	1190	9223	350
30	1440	662	12400	480	3120	684	13375	491			7428	645	2808	802	286	1000	1806	644	165	771	49	1106	9173	373
31	1518	666			2823	700	10101	472			5735	635			238	1019			227	725	47	1132		
Avg.	9670	303	19974	381	8721	650	3376	736	4492	685	4875	651	3023	658	728	805	3494	595	753	670	163	893	7757	355

DAILY FLOW AND CONTINUOUS RECORDED QUALITY DATA

PHS Station No.: 283
Location: Verdigris River near Inola, Oklahoma
Water Year: 1962

Basin: Arkansas River
Tributary to: Arkansas River
Remarks: Records good. Occasional minor stratification.

Equations Used to Compute Constituents--
Chlorides: Log Cl =1.843 Log Sp.C.-1.3380
Sulfates: SO_4=0.0101 Sp. C. + 33
Dissolved Solids: DS =0.5928 Sp. C.

Discharge (cfs) and Specific Conductance, Micromhos/cm (μmhos)

Day	October		November		December		January		February		March		April		May		June		July		August		September	
	cfs	μmhos	cfs	μmhos	cfs	μmhos	cfs	μmhos	cfs	μmhos	cfs	μmhos	cfs	μmhos	cfs	μmhos	cfs	μmhos	cfs	μmhos	cfs	μmhos	cfs	μmhos
1	85	887	9640	473	268	576	794	673	263	940	1496	720	13138	474	8308	437	18250	244	1181	695	6803	379	645	639
2	142	995	11304	426	282	607	762	689	250	943	1155	692	13200	476	15260	389	14913	289	755	749	5683	369	635	656
3	211	854	7766	401	279	643	706	700	250	988	1493	721	10326	500	21946	299	14446	331	598	703	5278	362	558	668
4	198	798	4543	414	256	686	670	708	259	1000	2977	754	7979	515	26113	245	18625	312	520	694	4753	386	8108	380
5	166	804	4640	364	406	669	610	732	271	996	4042	646	6800	508	35483	253	16850	324	456	653	2760	426	28815	192
6	139	803	5000	366	1008	646	541	742	281	979	5217	507	6220	514	41875	253	11553	330	424	630	1261	438	33629	184
7	115	864	4897	393	1223	636	506	758	307	955	3288	553	4885	528	45725	232	8668	355	424	644	964	477	30625	211
8	100	866	3416	455	1453	807	520	759	339	950	3534	629	3357	542	48163	220	12178	364	2283	759	1136	498	24033	211
9	91	899	1450	488	1056	934	546	753	368	948	5059	614	3440	553	50200	195	14550	344	5822	514	933	520	12578	278
10	85	906	718	507	952	798	515	750	395	953	3826	678	3775	582	55933	176	13875	421	2897	376	723	542	7618	320
11	82	908	476	538	5698	537	470	750	422	983	3630	633	5875	605	103433	152	12413	390	1204	468	593	567	8565	331
12	82	959	404	567	13335	494	461	753	462	1040	3354	509	11174	536	113948	150	9353	389	738	443	485	592	8393	354
13	78	932	301	595	13963	375	444	769	504	1032	2088	436	13150	451	97750	152	7900	399	1188	423	463	625	12200	354
14	79	995	268	608	9828	356	464	772	517	1023	1318	438	10345	451	81500	171	10682	344	3436	285	17631	268	31675	232
15	105	1040	323	603	4790	358	618	757	486	1000	1041	496	8440	439	66563	207	1[illegible]058	320	21543	226	36088	166	38300	174
16	599	782	402	603	4770	349	858	744	479	1010	940	549	8440	453	49125	239	16183	355	38454	168	39025	159	40950	177
17	2793	742	3405	635	5210	334	1090	749	465	1037	1223	595	7900	522	35238	290	9743	425	34813	163	32469	190	42525	173
18	1160	659	1953	761	5213	421	915	775	2818	768	1815	639	7185	530	27138	295	5401	414	24875	168	13350	240	43000	183
19	962	637	1053	664	3888	549	734	909	4429	740	1695	670	6691	540	26546	277	3753	439	10894	228	2918	397	42375	190
20	739	716	794	640	2240	575	692	919	2986	727	1770	670	6456	518	29938	262	2850	442	2867	335	2463	485	41000	170
21	643	634	592	640	1484	590	643	901	3488	640	4242	660	6760	520	33538	264	2260	447	3068	392	2544	518	37663	150
22	1013	519	467	606	1275	595	625	955	4741	771	6341	701	15523	401	32129	290	1855	467	6636	376	1968	560	32938	177
23	1001	562	334	576	1149	603	553	955	5978	702	9577	557	17408	371	33363	243	1425	499	19592	259	4704	532	28275	239
24	674	628	251	590	957	615	468	845	6347	685	10663	375	16096	374	34775	258	1140	537	21942	280	4022	495	26850	241
25	503	672	207	600	884	620	429	807	6409	705	9348	447	14508	338	34050	268	971	560	15371	296	2817	555	25888	234
26	398	650	257	593	818	621	363	835	5275	663	8373	574	9753	411	30288	267	863	582	8122	363	2954	542	22188	265
27	332	650	442	566	782	626	364	850	2488	673	7333	659	13717	326	25075	301	786	623	7465	370	2970	541	20550	266
28	272	650	326	554	717	643	363	871	1793	725	12260	603	15633	274	24288	303	685	644	8543	392	1628	516	24900	272
29	239	677	300	566	661	670	363	879			12525	447	11381	320	22800	305	838	649	9136	355	1035	533	24783	258
30	1656	553	292	562	655	673	337	888			7888	480	9210	374	21588	313	1752	650	9326	352	836	583	21292	274
31	6922	516			790	673	295	904			9223	511			20538	300			9065	359	730	604		
Avg.	699	626	2207	462	2783	472	572	793	1895	741	4798	557	9626	438	41688	225	8461	356	8827	271	6516	275	24052	216

DAILY FLOW AND CONTINUOUS RECORDED QUALITY DATA

PHS Station No.: 770
Location: Arkansas River near Haskell, Oklahoma
Water Year: 1962

Basin: Arkansas River
Tributary to: --
Remarks: Records good. Frequent minor stratification.

Equations Used to Compute Constituents--
Chlorides: Log Cl =1.21931 Log Sp.C.-1.31986
Sulfates: SO_4=0.0832 Sp. C.
Dissolved Solids: DS =0.5806 Sp. C.

Discharge (cfs) and Specific Conductance, Micromhos/cm (μmhos)

Day	October		November		December		January		February		March		April		May		June		July		August		September	
	cfs	μmhos	cfs	μmhos	cfs	μmhos	cfs	μmhos	cfs	μmhos	cfs	μmhos	cfs	μmhos	cfs	μmhos	cfs	μmhos	cfs	μmhos	cfs	μmhos	cfs	μmhos
1	15146	670	5306	1819	8199	2000	7315	2621	17583	1266	5658	2300	5446	2027	4255	2322	5747	1894	7892	3254	6710	991	3263	1429
2	13192	724	5495	1713	7931	2040	7228	2959	22275	1014	5384	2290	4835	1986	4175	2284	6450	1025	6251	3076	8113	1365	2893	1358
3	10641	774	9633	1344	7700	2145	6876	2903	21975	904	5283	2199	4363	2042	4181	2130	15802	931	6151	2671	9458	2131	3512	1411
4	8993	874	69731	628	7473	2195	6658	2618	20375	900	54.3	2051	4138	[illegible]12	4554	2216	24000	609	6274	2801	10423	2436	4610	817
5	8635	1006	107221	356	7260	2218	6633	2347	18125	935	5194	2531	4066	2263	4436	2295	17388	506	5002	2387	11758	1750	4762	1261
6	7888	1246	96788	321	7048	2300	6656	2200	15725	1143	4869	2513	4101	2350	3989	2100	24813	550	4310	2017	13825	2012	4978	1505
7	6830	1317	57883	396	6821	2300	6721	2200	13600	1513	5023	2412	4091	2488	3616	2400	35460	700	3783	2005	11235	1790	4511	1450
8	6123	1409	37017	499	6628	2275	6808	2288	11900	1699	5081	2388	4040	2413	3311	2900	52532	800	3319	2349	8728	1632	4580	1332
9	5498	1525	23748	675	6655	2239	6908	2276	8866	1854	5015	2450	4093	2550	3084	3025	36038	750	2994	2756	7736	1600	9002	1169
10	5058	1514	16975	1032	7510	2225	6628	2429	9543	1900	4923	2550	4098	2571	2893	3125	53367	850	8716	1900	7779	1680	8008	958
11	5040	1580	13700	1502	9514	2225	5115	2500	8806	1900	4875	2625	6167	1406	2719	3200	57175	1080	19208	865	7475	1727	6673	917
12	18896	776	11850	1625	10650	2225	3373	2500	8186	1914	4685	2750	8345	1372	2546	3250	43263	950	18281	657	7366	1762	5398	929
13	85335	394	10488	1711	10800	2215	3105	2500	7703	2050	4455	2800	7686	1398	2419	3400	28600	933	13625	668	6963	1849	4638	990
14	73254	388	9501	1787	9578	1852	3170	2500	7289	2100	4319	2800	5791	1314	2341	3450	19950	1092	12275	700	6373	1919	4498	1059
15	56010	370	8794	1743	8170	1757	3516	2406	7019	2200	4263	2800	5340	1367	2224	3450	14913	1336	11363	685	5875	1926	4310	846
16	46469	379	9552	1648	7438	1889	3685	2560	7445	2250	4284	2800	5955	2421	2123	3373	11686	1727	9938	727	5024	1900	22146	419
17	29119	400	21762	1305	10940	1489	3364	2507	7376	2300	4276	2775	4974	2219	2040	3200	9714	2340	8159	727	4491	1977	9333	734
18	20088	498	23394	999	13013	1363	3230	2419	6684	2350	4231	2750	4509	1956	1958	3226	8185	2774	7490	894	4095	2000	9111	967
19	14575	655	31633	1017	12425	1434	3200	2461	6815	2400	4124	2725	4199	2054	1861	3046	7361	2799	11562	841	3743	2010	5511	860
20	10818	747	36446	1031	12913	1445	3183	2500	7804	2400	3983	2700	4014	2491	1773	2995	6519	2685	12988	860	3410	2033	11944	661
21	9283	851	26796	905	13525	1426	3179	2550	8595	1968	6453	2279	3893	2775	1701	3035	6019	2562	11838	682	3088	2097	16304	521
22	8363	1028	17808	872	13925	1708	3171	2563	7985	1800	8797	1774	3933	2980	1640	2938	5953	2518	10058	593	2810	2166	8644	505
23	7680	1202	22925	924	12438	1698	3169	2451	7170	1800	5821	1975	4869	2849	1578	2894	5054	2360	8779	723	2544	2200	7036	690
24	7189	1325	18969	1068	10115	1590	3161	2294	6908	1800	5013	2049	7383	2306	1501	2669	4629	2216	7929	1586	2319	2143	8773	3857
25	6761	1470	14831	1201	8975	1634	3285	2205	6616	1757	5134	2043	5294	2419	1464	2757	4376	2373	7570	921	2211	2100	9 1	3379
26	6366	1575	12350	1436	8478	1744	4228	2211	6311	1790	10424	1996	4455	2222	1406	2662	4191	2269	12048	1202	2138	2068	15016	1298
27	6106	1618	10925	1753	8211	1958	5614	2220	6105	1900	9817	1818	4438	2407	1346	2650	4125	2213	9364	835	2099	2180	16500	1017
28	5753	1675	9901	1985	7979	2075	6416	2220	6009	2248	7470	1642	3864	2244	1355	2768	4355	2118	11642	815	2001	2207	11756	1228
29	5511	1703	9145	2000	7741	2280	6928	2220			6523	1744	4451	2250	1595	2666	4661	2195	10473	732	1953	2200	9313	1386
30	5326	1758	8640	2000	7538	2491	8305	2226			5748	1944	4408	2131	2125	2475	5418	2346	7740	635	2298	2172	8794	1587
31	5301	1758			7475	2598	13038	1839			5483	2187			5736	2299			7408	777	3043	2039		
Avg.	16814	677	25307	841	9196	1908	5286	2378	10385	1587	5549	2269	4908	2119	2643	2706	17591	1132	9175	1141	5712	1872	8164	1155

DAILY FLOW AND CONTINUOUS RECORDED QUALITY DATA

PHS Station No.: 259
Location: Arkansas River at Tulsa, Oklahoma
Water Year: 1961

Basin: Arkansas River
Tributary to: --
Remarks: Records poor, Frequent major stratification.

Equations Used to Compute Constituents--
Chlorides: Log Cl =1.2193 Log Sp.C.-1.3199
Sulfates: SO_4=0.0930 Sp. C.
Dissolved Solids: DS =0.5806 Sp. C.

Discharge (cfs) and Specific Conductance, Micromhos/cm (µmhos)

Day	October		November		December		January		February		March		April		May		June		July		August		September	
	cfs	µmhos	cfs	µmhos	cfs	µmhos	cfs	µmhos	cfs	µmhos	cfs	µmhos	cfs	µmhos	cfs	µmhos	cfs	µmhos	cfs	µmhos	cfs	µmhos	cfs	µmhos
1	6309	823	16500	711	2963	2800	2973	3023	2940	3332	3459	2170	19963	573	3545	2000	7245	1559						
2	5325	1042	18558	808	3120	2795	2888	3000	2284	3375	3205	2446	12517	650	5266	2000	6616	1629						
3	4690	1499	23650	699	3313	2725	2845	3015	2476	3092	3033	2742	9529	925	19744	900	10110	1121						
4	4013	1570	16819	529	3485	2663	2831	3111	2469	3131	2773	2989	9918	1200	17821	512	13725	1053						
5	3498	1663	11486	520	3564	2587	2775	3175	2525	3122	2671	3052	11579	1460	21285	422	25240	1013						
6	3120	2045	8554	564	3660	2512	2736	3212	2514	3050	2578	2980	10471	1415	23050	500	25367	962						
7	2840	2538	6921	750	3634	2621	2683	3388	2510	3038	4024	2609	8296	1410	69040	250	17563	1114						
8	2678	2737	5920	998	3386	2773	2641	3423	2499	3015	4668	1843	7190	1636	135417	200	17550	1245						
9	2539	2758	5253	1223	3214	2700	2605	3208	2424	3050	3475	2576	6628	1783	161167	200	17000	1189						
10	2394	2693	4710	1412	3335	2650	2541	3033	2360	3082	3018	2827	5920	1944	127619	385	24713	1210						
11	2300	2600	4361	1573	3980	2500	2480	3020	2308	3200	2738	2942	6748	1966	58679	475	20700	985						
12	2248	2540	4065	1753	5174	2300	2420	3055	2300	3384	2584	2953	9965	1571	38042	634	13550	1054						
13	2233	2451	3860	1903	5224	2000	2371	3123	2311	3536	2451	2905	13767	1213	26429	793	10938	1257						
14	2185	2400	3669	2095	4462	1790	2379	3067	2394	3480	2326	2917	13963	1112	19808	1028	20709	877						
15	2159	2445	3645	2121	5255	1790	2330	3050	2520	3325	2190	2997	11938	950	15513	1220	28971	866						
16	2134	2515	3711	2023	7846	1672	2270	3055	2698	3300	2128	3023	10103	915	13225	1331	13664	840						
17	2482	2752	3475	2059	6709	1500	2211	3177	2916	3115	2194	3007	8808	1035	11800	1481	11104	1230						
18	8615	1660	3238	2143	5510	1600	2160	3250	3895	2357	2356	2989	7630	1222	10700	1520	17906	1300						
19	8113	808	3225	2183	4820	1750	2113	3250	3850	3032	2516	2950	6708	1495	10092	1585	15096	1056						
20	7801	865	3195	2200	4370	2000	2074	3250	4611	3921	2698	2904	6073	1819	9038	1696	10255	1036						
21	16165	1289	3176	2205	4136	2250	2004	3287	4298	2878	2788	2877	5506	2050	9275	1779	7879	1300						
22	13963	1139	3086	2349	4000	2400	1963	3400	5586	2218	3085	2873	5068	2015	17321	1601	6719	1500						
23	11037	1215	3028	2450	3825	2950	1976	3500	8548	1628	5515	3436	4695	2087	29285	900	6136	1600						
24	8076	1077	3020	2450	3666	3294	1860	3600	6578	1303	6939	2379	4474	2180	34579	650	5718	1700						
25	6366	1214	3020	2463	3480	3388	1723	3750	5345	1365	7656	2085	4634	2185	24025	800	5299	1800						
26	5288	1349	3010	2581	3244	3313	1603	3850	4710	1613	8353	1905	5444	1900	19050	1050	4880	1900						
27	4553	1530	2995	2650	3081	3340	1550	4200	4188	1757	7790	1756	5720	1800	17500	1100	4534	2000						
28	4108	1741	2933	2700	2958	3410	1788	3700	3791	1896	8081	1426	5288	1750	13317	1250	4295	2050						
29	10177	1560	2945	2769	2945	3449	2000	3600			6795	1603	4538	1850	10103	1350	4156	2100						
30	21775	795	2940	2805	2980	3352	2213	3550			14258	1514	3980	2000	8978	1425	4029	2200						
31	22063	743			3010	3118	2572	3500			23013	741			8070	1492								
Avg.	6492	1337	6166	1276	4011	2443	2309	3286	3494	2575	4882	2080	8235	1334	31896	892	12722	1179						

DAILY FLOW AND CONTINUOUS RECORDED QUALITY DATA

PHS Station No.: 258
Location: Cimarron River at Mannford, Oklahoma
Water Year: 1961

Basin: Arkansas River
Tributary to: Arkansas River
Remarks: Records fair. Frequent minor stratification occurs at normal flows.

Equations Used to Compute Constituents--
Chlorides: Log Cl =1.2032 Log Sp.C.-1.2720
Sulfates: SO_4=0.0661 Sp. C.
Dissolved Solids: DS =0.5887 Sp. C.

Discharge (cfs) and Specific Conductance, Micromhos/cm (μmhos)

Day	October		November		December		January		February		March		April		May		June		July		August		September	
	cfs	μmhos	cfs	μmhos	cfs	μmhos	cfs	μmhos	cfs	μmhos	cfs	μmhos	cfs	μmhos	cfs	μmhos	cfs	μmhos	cfs	μmhos	cfs	μmhos	cfs	μmhos
1	751	3521	5963	1650	410	7750	645	9250	494	8000	602	7770	2528	5943	424	8300	515	4144	958	5625	645	12813	580	4844
2	536	4511	4233	2050	412	8000	668	8800	475	8100	571	8601	1945	3277	414	8350	506	4713	595	4700	524	11556	550	5392
3	434	5464	2668	2300	413	8200	676	8500	481	8100	533	9115	1571	2851	414	8350	1822	2421	468	3900	442	10548	537	6069
4	374	6712	2013	2500	491	8000	652	8500	474	8026	494	9095	2583	4248	531	8056	3475	2550	421	3800	376	8653	921	5460
5	312	8263	1630	2700	634	6700	624	8600	461	8000	472	9162	3813	5424	1852	3792	18319	801	409	4174	328	7481	817	3915
6	288	8287	1360	2900	816	6200	591	8500	461	8075	465	9706	2655	3092	1753	4654	12525	975	402	4756	300	7000	800	4684
7	251	8600	1209	3100	692	6000	571	8500	462	8013	491	10100	1960	3323	7307	2555	7863	1750	5265	3338	291	6877	621	4874
8	226	8800	1021	3240	517	5397	549	8400	468	7975	482	10106	1604	5037	10819	1542	6219	1775	5474	1272	283	6837	400	4631
9	219	9200	902	3653	501	6581	531	8350	474	7738	465	9522	1410	6902	8651	2825	10346	975	1829	1308	279	6894	483	4512
10	221	9400	875	4508	694	6584	510	8300	481	7910	452	9346	1249	7864	5895	2677	9850	1150	732	1735	272	6926	545	4836
11	237	8992	852	5323	1644	4784	499	8331	527	8058	409	9115	1213	7024	3968	2054	5743	2800	406	2597	257	6986	343	3857
12	243	8491	845	6184	1649	3926	488	8494	517	8175	391	8335	1608	5635	3798	1732	3610	3800	557	2591	267	7399	590	4575
13	279	7732	996	6755	1255	3213	481	8500	489	8400	373	7925	2265	5906	2843	2475	2990	3694	811	2279	426	7073	24012	977
14	234	7406	1430	7000	1025	3817	480	8500	511	9100	352	8315	2011	5504	1819	2684	13297	1120	5562	785	1697	3417	50799	950
15	246	6748	1323	6670	1117	5598	480	8325	593	8900	341	8700	1636	4578	1299	2328	9319	765	6704	574	1230	3471	27506	675
16	299	6392	839	5706	1103	6019	479	8263	608	8500	340	8781	1298	5293	1019	2685	3289	900	4332	1284	520	2618	8980	595
17	761	5000	667	5299	977	6031	475	8317	674	8300	348	8806	1141	6282	825	3642	5334	1100	5252	1295	563	4631	5478	554
18	1293	3000	641	6211	932	5919	474	8325	1142	9600	406	8690	1016	8762	684	4292	8005	1150	2960	2666	988	4558	3358	669
19	1735	2800	609	6500	875	6214	472	8400	1861	8000	426	8317	928	10730	666	4599	5190	1250	1698	3196	1609	3953	2308	927
20	6656	2400	539	6500	812	7021	461	8100	1519	5700	462	8030	839	10313	534	4924	3078	1320	1281	4714	2443	3962	1943	1244
21	8430	1725	503	6610	792	8838	431	8000	972	6500	515	7938	773	8258	2717	1931	2063	1338	1366	4293	1231	4095	1813	1344
22	5078	1900	494	6257	777	11777	439	8000	829	7000	2075	8536	719	7332	8778	1507	1558	1716	2128	4100	733	4676	1658	1857
23	3208	2150	486	6400	747	13000	442	8025	733	7100	2403	6018	671	7349	5935	1263	1254	2235	3133	3059	4877	5436	1730	2356
24	2080	2800	469	6605	714	12500	427	8300	827	7200	2010	7397	639	7800	3321	1583	1050	2762	1535	4175	4164	3478	1755	2694
25	1498	3016	455	6878	680	11500	350	8200	964	7300	1610	10203	584	8200	2578	1471	869	3536	1000	4700	2468	2442	1539	3109
26	1245	3865	449	7000	647	12200	385	8100	752	7400	1384	10152	549	8100	2872	2246	733	3954	795	5400	2173	2679	1274	3299
27	1118	4814	447	6907	635	10700	468	8000	644	7500	1206	8111	525	8000	2105	3548	639	4300	698	5000	1648	5029	4418	2688
28	1075	5845	442	6184	633	10000	489	8000	618	7700	1097	7301	497	8000	1240	2502	577	4725	656	3950	1108	7007	6844	2161
29	3116	6274	434	6651	625	9900	495	8000			1296	8737	465	8100	913	2213	551	4900	671	5000	801	5870	4873	903
30	9213	1461	419	7500	619	9750	501	8000			1114	8051	436	8250	713	2696	1189	5250	824	5681	670	4727	3087	696
31	8357	1046			633	9500	498	8000			2174	6095			601	3425			806	7670	614	4450		
Avg.	1936	2716	1174	3923	789	7253	508	8348	699	7765	831	8225	1371	5769	2816	2347	4726	1510	1927	2471	1104	4787	5352	1725

DAILY FLOW AND CONTINUOUS RECORDED QUALITY DATA

PHS Station No.: 258
Location: Cimarron River at Mannford, Oklahoma
Water Year: 1962

Basin: Arkansas River
Tributary to: Arkansas River
Remarks: Records fair. Frequent minor stratification occurs at normal flows.

Equations Used to Compute Constituents--
Chlorides: Log Cl =1.2032 Log Sp.C.-1.2720
Sulfates: SO_4=0.0661 Sp. C.
Dissolved Solids: DS =0.5887 Sp. C.

Discharge (cfs) and Specific Conductance, Micromhos/cm (μmhos)

Day	October		November		December		January		February		March		April		May		June		July		August		September	
	cfs	μmhos	cfs	μmhos	cfs	μmhos	cfs	μmhos	cfs	μmhos	cfs	μmhos	cfs	μmhos	cfs	μmhos	cfs	μmhos	cfs	μmhos	cfs	μmhos	cfs	μmhos
1	3402	760	805	4223	1113	5340	1171	8675	2272	6181	538	7600	638	5465	588	3973	1970	642	2099	4706	3042	4843	175	7225
2	3087	900	4979	1898	1101	5381	1126	7153	1909	6644	681	6772	583	5779	850	5018	6811	661	3088	4992	3505	5453	172	7475
3	2406	1080	20285	1397	1100	5475	1120	5928	1626	5552	902	6352	545	6261	755	4159	7603	570	2178	3224	2730	3577	676	3811
4	2322	1431	13283	1109	1100	5644	1120	5800	1593	6332	857	6111	557	6599	678	4255	4043	689	1596	2577	5459	3947	1018	2992
5	1643	1657	7303	836	1096	5700	1133	5000	1503	7877	770	5576	636	6500	667	5599	3130	973	1315	3780	5122	3244	1086	2719
6	1500	2611	4788	828	1069	5770	1218	5000	1411	8391	738	5886	635	6775	583	6764	2774	993	941	5311	2845	2617	776	2298
7	1400	2450	3893	1186	1033	5733	1100	5800	1320	7684	709	6203	• 626	7548	501	6882	12088	1410	701	6066	1840	2306	1294	2630
8	1300	2600	3080	2191	1043	5580	1085	5800	1228	6463	733	6362	608	8399	442	6802	5286	3500	625	5500	1363	2269	885	1849
9	1208	2800	•2440	4576	1843	4742	964	5800	1123	6066	708	6712	613	8267	404	8074	24580	900	583	5043	1156	3803	733	1224
10	1429	2300	2088	4767	2004	4099	906	5850	1035	5687	674	6614	1101	5629	370	9144	25125	700	3134	1547	944	6645	707	1518
11	13398	1230	1825	4428	1653	3825	894	6062	980	5563	632	6351	3481	2614	347	9377	20533	425	1823	2798	701	8044	593	1810
12	15400	613	1605	4324	1378	4075	850	6421	931	5581	610	6399	2352	2574	336	8751	9769	650	1168	2618	521	7639	431	2415
13	8219	629	1425	4320	1123	4618	800	6393	885	5683	655	6704	1662	3241	330	8355	6484	985	807	3190	454	6792	337	2750
14	5033	615	1283	4075	1010	4800	763	6112	816	6056	682	7091	2779	4043	325	9045	4385	1375	620	2934	450	6125	287	3218
15	3213	675	2689	2591	1000	5003	800	5852	825	6287	643	8214	1672	2495	319	9063	3448	2589	538	4626	439	6055	1533	2004
16	2309	750	4754	1724	2792	2950	850	5662	817	6581	590	9125	1183	2748	305	8522	2850	3846	605	5659	392	6000	4792	1294
17	1778	885	3360	1661	4308	2097	900	5100	873	6554	551	8256	1001	4527	289	7841	2324	5070	613	6516	329	6111	1943	657
18	1409	1120	4428	2232	2825	2033	950	5250	973	6363	535	7063	902	5983	270	7235	1891	5400	975	6251	295	6364	870	897
19	1180	1380	4078	2573	2085	2809	981	5400	832	5839	533	6713	824	6739	252	7580	1585	5202	1068	3749	265	6250	738	1313
20	1040	1633	2795	1905	2485	4221	906	5700	789	6048	2046	3238	957	7614	243	7751	1326	4800	635	2867	230	6463	974	1166
21	965	1997	2975	2232	2228	4391	850	5750	744	6736	1946	3425	1158	5859	236	7790	1125	4600	484	3839	209	6898	937	3529
22	874	2402	5370	1931	1890	4432	806	6000	700	8885	1000	4635	1187	2376	232	7963	1029	4400	502	4586	188	6937	3195	10459
23	802	2852	4255	2237	1643	4748	806	6100	697	7844	719	5482	1865	2691	226	7817	1663	3000	442	6333	172	6950	3185	9284
24	753	3207	2820	3101	1504	4721	864	5900	685	6500	721	6111	1110	4404	223	7215	1535	4800	3929	1825	229	7006	2391	5785
25	720	3384	2128	5075	1411	5464	951	5200	675	6662	3969	2635	798	3978	222	7208	1059	5200	2491	1325	175	7238	2419	5963
26	692	3612	1663	6045	1326	6334	1212	4609	657	6937	2370	2493	684	3882	253	7131	916	5300	735	2150	175	7163	2185	6287
27	678	3842	1345	4721	1229	6837	1360	5019	609	7000	1413	3502	649	3639	253	6824	970	5400	446	3750	175	7125	1794	5941
28	666	3950	1210	4516	1193	7129	1423	5355	508	7200	1305	4476	915	4451	262	5749	1326	5200	382	4299	175	7122	1413	6613
29	661	4039	1163	4723	1240	7614	1438	5635			1129	4418	1070	3972	2915	2167	3608	4700	374	4804	175	7400	1209	7012
30	658	4129	1139	5096	1284	8312	1827	5535			838	4104	836	3898	3851	1439	2729	4600	408	5088	175	7250	1088	6616
31	666	4238			1231	9494	1763	5684			713	4658			2295	689			646	4935	175	7000		
Avg.	2607	1276	3842	2174	1591	4648	1056	5635	1036	6599	1003	4902	1121	4294	643	4342	5466	1537	1160	3498	1100	4371	1328	4551

DAILY FLOW AND CONTINUOUS RECORDED QUALITY DATA

PHS Station No.: 253
Location: Cimarron River at Perkins, Oklahoma
Water Year: 1961

Basin: Arkansas River
Tributary to: Arkansas River
Remarks: Records fair. Frequent minor stratification.

Equations Used to Compute Constituents--
Chlorides: Log Cl =1.1906 Log Sp.C.-1.2280
Sulfates: SO_4=0.0680 Sp. C.
Dissolved Solids: DS =0.5977 Sp. C.

Discharge (cfs) and Specific Conductance, Micromhos/cm (µmhos)

Day	October		November		December		January		February		March		April		May		June		July		August		September	
	cfs	µmhos	cfs	µmhos	cfs	µmhos	cfs	µmhos	cfs	µmhos	cfs	µmhos	cfs	µmhos	cfs	µmhos	cfs	µmhos	cfs	µmhos	cfs	µmhos	cfs	µmhos
1	403	10929	3203	1260	409	7062	524	9363	457	9500	464	10576	1178	3299	407	8474	397	7513	426	4239	359	6840	414	7021
2	335	12527	1778	1955	416	7825	519	10224	446	10800	436	10671	1339	4020	463	7278	387	7350	378	5096	309	5818	367	7499
3	297	10416	1518	3896	429	7822	504	10688	409	10800	413	11732	3598	5400	644	7261	966	4672	345	5431	274	6124	351	7492
4	269	9091	1149	3923	464	7781	486	9019	399	9500	406	11450	3060	3072	651	5201	7851	1076	315	5343	252	2176	543	5815
5	252	9500	873	3134	472	6700	471	8022	383	8600	408	11500	1746	3494	1300	3731	12400	1966	298	5825	231	4737	576	4215
6	244	9500	739	3840	415	6991	461	8100	383	8700	399	11500	1286	6472	10683	1216	8308	1498	282	6250	225	7275	406	5112
7	230	9500	639	4933	406	7357	454	8299	399	8900	380	11500	1060	8882	7957	2375	4798	1154	711	3713	224	7859	383	5236
8	224	9392	593	5815	405	8465	441	8450	420	9300	360	10042	915	8655	6155	3365	9868	684	564	4160	217	7824	411	4628
9	215	9322	553	6733	408	8479	435	8726	459	9500	339	8500	864	6835	4546	2400	9506	3082	394	4054	207	7352	279	2188
10	213	9394	516	7266	452	7222	429	9125	436	9300	332	8500	951	6401	3516	1800	4420	4695	335	4499	212	6701	568	1346
11	208	9003	486	7476	604	5808	420	8976	406	9250	328	8912	1647	9330	3300	2950	2723	4018	317	4452	240	7440	381	2771
12	200	8442	460	7127	649	6927	414	8756	439	9250	321	9000	1761	6904	2010	2430	2351	4742	306	5075	267	6742	411	2967
13	276	7169	438	6726	827	6607	428	8594	516	9200	316	9347	1450	4531	1303	2407	1699	5695	293	5976	286	7420	23457	907
14	346	6949	433	6624	861	6659	433	8575	518	8900	312	9650	1163	5970	1034	3625	1868	4505	419	5018	329	5974	35758	444
15	808	6247	446	6650	791	6387	426	8725	555	11547	309	9475	1019	8380	872	4900	1939	3863	2871	1569	378	5787	16871	439
16	1063	4755	459	6625	740	6806	423	8752	752	14242	309	9313	948	11044	752	5400	6755	2868	3033	3510	956	4439	4428	673
17	671	3718	433	6937	704	7576	433	8375	709	16073	318	9073	856	11211	682	5750	8540	2101	1743	5000	1102	3922	2121	1260
18	1182	2086	529	6794	682	9652	431	8150	948	11006	362	8481	774	8518	611	5637	4149	1358	1104	5383	2261	3796	1496	1960
19	6829	2161	436	6500	683	13750	415	8161	704	9166	438	7988	725	7854	572	5650	2066	1331	1049	7071	1348	4832	1184	2472
20	1875	1238	406	6795	671	13464	410	8400	626	9500	1811	8544	674	7899	583	5587	1398	2117	781	8273	780	4147	1056	2790
21	5391	1088	391	7025	620	13642	363	8449	569	9300	2780	5748	632	8419	842	5541	1061	2828	672	9018	2516	5166	1047	3258
22	2808	2639	385	7197	576	12608	377	8300	643	9500	2183	7767	599	8451	2500	2359	853	4051	685	7394	5158	3808	1130	3534
23	1611	2866	379	7719	538	13670	362	8754	737	9500	1529	11168	560	8077	1767	1698	734	4440	624	7372	3000	2252	1049	3685
24	1134	3281	371	7988	516	12628	344	9337	662	9700	1200	9176	529	7976	2013	2556	641	4801	757	5684	2170	2881	857	4048
25	926	4776	370	7525	505	11377	271	9423	560	10000	1014	7330	491	7826	2092	3699	582	5009	725	4287	1905	7510	1005	3942
26	838	7105	369	7324	495	10932	227	9636	518	10000	903	7764	458	8300	1109	2187	531	5223	551	5642	1413	7604	3465	3155
27	2139	6016	364	6975	484	10594	284	9976	516	10200	1037	8888	439	8700	811	2887	486	5534	449	6762	1028	5081	4091	1183
28	3455	2127	379	6621	471	10301	335	8652	491	10600	882	8225	419	8900	673	4000	804	5834	704	7910	811	4310	3043	628
29	6914	1123	390	6358	465	10362	361	8147			827	8480	396	8776	587	5200	739	4311	785	16125	650	4806	1355	1057
30	7900	1192	400	6187	465	10124	413	9500			1421	8068	385	8525	504	6500	493	3158	595	13059	543	5897	1329	1307
31	6380	1967			495	9328	437	9300			1170	3668			421	7500			466	9349	464	6719		
AVG.	2119	2459	663	4800	552	9239	411	8864	538	10256	765	8404	1064	6580	1979	2879	3310	2466	741	5615	971	4690	4334	1009

DAILY FLOW AND CONTINUOUS RECORDED QUALITY DATA

PHS Station No.: 233
Location: Cimarron River at Perkins, Oklahoma
Water Year: 1962

Basin: Arkansas River
Tributary to: Arkansas River
Remarks: Records fair. Frequent minor stratification.

Equations Used to Compute Constituents--
Chlorides: Log Cl =1.1906 Log Sp.C.-1.2280
Sulfates: SO_4=0.0680 Sp. C.
Dissolved Solids: DS =0.5977 Sp. C.

Discharge (cfs) and Specific Conductance, Micromhos/cm (μmhos)

Day	October		November		December		January		February		March		April		May		June		July		August		September	
	cfs	μmhos	cfs	μmhos	cfs	μmhos	cfs	μmhos	cfs	μmhos	cfs	μmhos	cfs	μmhos	cfs	μmhos	cfs	μmhos	cfs	μmhos	cfs	μmhos	cfs	μmhos
1	1692	1478	423	4609	924	6765	794	6053	1571	6084	373	6890	401	8000	700	5111	570	1778	3121	2726	3082	3485	134	6832
2	1815	1739	7415	2265	911	6902	785	6375	1436	7684	356	6287	389	8323	633	6412	1435	1136	1960	2697	3329	3525	131	6450
3	1323	3127	25759	1265	905	6870	769	6664	1408	8756	476	6541	399	8535	611	7320	2868	869	1728	5514	5503	3015	344	4400
4	949	2500	14638	704	907	6808	759	7006	1318	8769	524	6600	407	9942	514	7312	2988	747	1335	6405	3643	2720	467	2800
5	803	3547	6678	1056	896	6800	770	6163	1205	7110	523	6875	398	11014	429	7419	3308	4426	1163	5759	1673	2065	930	2000
6	700	4025	4340	2306	882	6692	788	6419	1118	6513	525	6900	401	9746	374	7555	3155	7223	1025	5178	1220	2445	689	991
7	627	4010	3284	5326	869	6619	780	7387	1019	6209	502	7000	413	7800	351	8310	2288	9971	920	5024	1048	5653	399	1413
8	577	4049	2646	4995	873	6598	766	7500	916	6026	486	7000	442	6990	339	10183	2001	14532	838	5100	824	7896	464	2002
9	541	4412	2190	4696	944	6235	744	7500	850	6000	477	7056	438	6775	323	10551	17410	2622	792	5506	682	7216	331	2382
10	10363	797	1886	4669	999	5945	725	7312	805	6155	484	7392	615	5024	300	10674	27535	905	1104	3937	579	6123	299	3161
11	19421	704	1709	4613	1095	5849	530	7375	767	6294	513	7869	600	5198	272	9701	16025	567	869	2867	500	5663	276	3623
12	12306	755	1606	4612	820	5999	588	6925	722	6588	529	9669	2136	2677	246	8602	7062	686	852	5120	428	5673	250	4064
13	3976	606	1550	4822	519	6318	603	6347	686	6983	508	10276	1381	1920	219	8033	3598	2094	719	7616	376	6096	222	4738
14	2159	767	1496	5087	476	6253	623	6000	664	7232	473	8301	817	3492	201	7836	2841	6041	602	8872	333	6148	198	5028
15	1444	1023	1659	4764	667	5438	558	5757	677	7209	456	7227	687	5087	187	7914	1924	5622	543	7597	304	6250	930	2724
16	1075	1369	2777	3564	1056	4560	585	5733	740	6793	445	6975	593	6298	183	7525	1479	6009	506	7219	293	6914	382	3266
17	884	1763	4765	3160	1083	5387	663	5935	684	6626	435	7258	537	8421	179	7500	1214	5358	630	5203	269	6771	242	4481
18	745	2221	3510	2729	1406	5711	765	5540	641	6746	426	7550	616	8910	167	7401	1055	4823	628	4349	250	7302	199	4885
19	657	2709	2393	3130	1603	5211	855	5364	595	7077	428	7637	858	4710	162	7263	939	5164	557	5359	233	7701	191	5519
20	595	3391	2080	3830	1335	5284	703	5476	557	7230	446	7555	779	5206	155	7051	840	5138	587	7954	218	7526	1688	8832
21	542	3781	1975	4661	1163	5600	640	5766	545	7367	446	8062	733	5670	146	6975	782	5315	488	7711	204	7267	2286	8704
22	506	3912	2581	4586	1029	6200	615	5706	533	7500	444	7975	647	4492	140	6900	775	5400	372	6648	191	6600	2303	5258
23	480	4099	1760	7250	954	8200	690	5385	538	7500	439	7725	489	5455	137	6822	776	5420	303	6134	181	6704	1695	5916
24	458	4250	1480	7114	901	8500	828	6800	529	7897	462	7220	421	6295	131	6563	755	5844	270	5951	179	6701	1924	6084
25	437	4360	1258	5453	841	9000	898	7000	515	8981	540	6567	394	6507	134	6574	806	6803	266	5516	169	7137	1556	6046
26	402	4559	1160	5523	831	9300	935	7000	501	8602	735	5687	365	6737	198	6361	791	5794	263	5665	159	7439	1220	6709
27	376	4733	1083	5973	884	8667	1080	6800	339	7467	753	4795	394	6550	332	7362	2864	7513	278	5856	152	7312	1185	6713
28	361	4800	1023	6249	943	10929	1575	5636	468	7361	558	5691	537	4690	349	2573	3666	5449	288	5477	146	7467	923	6137
29	356	4753	980	6511	908	10524	1663	5865			490	6679	423	5600	2092	1553	2415	4970	385	5229	143	7400	826	5814
30	358	4768	94.	6650	851	8326	2127	6261			451	7000	759	5202	2009	781	2811	5377	1873	3743	140	7400	737	6028
31	375	4797			817	6515	1963	6240			421	7580			885	884			3620	3902	137	7275		
Avg.	2171	1348	3568	2801	945	6799	879	6338	805	7143	488	7270	616	5581	429	4965	3899	2923	932	4833	858	4128	781	5545

DAILY FLOW AND CONTINUOUS RECORDED QUALITY DATA

PHS Station No.: 769
Location: Salt Creek near Okeene, Oklahoma
Water Year: 1962

Basin: Arkansas River
Tributary to: Cimarron River
Remarks: Records good. Stratification nil.

Equations Used to Compute Constituents--
Chlorides: Log Cl =1.1804 Log Sp.C.-1.2204
Sulfates: SO_4=0.1142 Sp. C.
Dissolved Solids: DS =0.6942 Sp. C.

Discharge (cfs) and Specific Conductance, Micromhos/cm (µmhos)

Day	October		November		December		January		February		March		April		May		June		July		August		September	
	cfs	µmhos	cfs	µmhos	cfs	µmhos	cfs	µmhos	cfs	µmhos	cfs	µmhos	cfs	µmhos	cfs	µmhos	cfs	µmhos	cfs	µmhos	cfs	µmhos	cfs	µmhos
1	28	7208	269	3431	34	10791	23	12067	34	9307	17	12256	13	11980	13	11768	19	26457	9	12199	780	2249	3	9477
2	15	9225	3324	1406	33	11000	24	11366	30	9602	18	13204	13	13400	12	10911	44	30381	7	14073	169	1498	4	8992
3	12	8413	267	2301	34	11251	25	12082	29	10025	21	12679	13	12213	10	10872	141	11281	6	12059	43	4297	26	18649
4	11	8833	122	3244	34	11500	26	11849	28	10133	19	12980	14	11792	13	9881	38	4557	6	11553	38	6562	7	24600
5	10	9550	80	5000	32	11848	24	10241	27	10196	17	12361	17	12849	12	9325	14	10512	6	11124	32	8067	5	19214
6	9	9770	62	6500	29	11921	25	9371	25	10358	15	11854	19	18014	11	12654	32	6418	7	10686	26	8297	5	16655
7	8	10025	55	7000	28	11198	35	12755	26	10247	17	12015	23	23915	10	11271	27	16556	6	10716	23	8555	6	14284
8	7	9716	49	7500	32	10695	43	14665	27	11101	16	12881	20	20026	9	11216	71	10471	5	12291	19	8494	7	13124
9	221	929	46	7549	44	13660	44	10044	27	11287	16	13366	18	15845	9	10997	354	4595	6	12374	15	8933	6	13276
10	1662	2452	43	7749	33	13107	39	9549	26	11363	17	13330	16	16250	8	10838	145	2307	5	11628	12	9000	5	20173
11	187	1926	41	7949	26	11615	47	12150	24	11073	16	13025	18	13538	8	10207	44	6132	5	11283	10	9254	5	20098
12	71	3940	39	8357	23	10036	48	12031	24	10800	15	13168	17	17034	7	10058	25	7100	4	11000	8	9846	4	18672
13	43	5500	36	9000	21	12233	49	12465	22	10584	16	11067	15	17161	7	9690	19	8238	4	11000	7	9675	3	15890
14	30	5826	34	9194	26	13009	47	13297	21	10872	14	11674	14	14263	7	9509	16	8804	3	11000	6	9413	3	14637
15	25	6925	184	6859	28	13889	46	11677	23	10930	16	10561	13	13288	7	9275	14	9027	3	10813	5	8817	3	13680
16	23	8203	292	4232	42	10412	41	9931	21	12050	14	11481	13	12974	8	9072	12	9252	3	10669	5	9073	4	13346
17	22	8900	71	5232	72	9947	36	11316	19	11318	16	13204	29	14152	8	9116	10	9365	14	39586	4	9500	4	12267
18	20	9600	55	7107	46	9412	29	12117	20	11871	14	12661	25	14972	8	9122	9	9065	4	25201	4	9500	4	11718
19	19	11243	52	8063	32	10364	39	9087	18	11994	15	13048	15	11294	7	9223	8	9000	2	18930	3	9428	6	7361
20	18	10900	47	9468	27	10727	44	10719	19	11554	15	13421	13	12246	7	10094	8	8787	2	17240	3	9050	250	6356
21	18	10900	43	9652	26	11097	47	11053	22	11879	14	13949	12	12503	7	10027	7	8447	2	16214	3	9379	32	7618
22	17	10949	45	9379	28	11343	49	14802	21	12483	13	13770	12	11672	6	9932	21	10916	2	15460	3	9500	9	8039
23	16	11470	41	9500	24	11575	48	14837	21	12137	13	12119	13	10550	5	9707	31	21240	2	14573	2	9500	7	10073
24	16	12438	38	9407	23	10564	49	12758	20	12351	15	13002	12	12202	5	10583	20	13909	3	12530	3	9373	7	10500
25	15	12325	36	9533	26	10483	60	13273	18	12236	21	14521	12	13011	5	11137	19	12644	7	19077	3	9275	7	10146
26	15	12303	36	9317	27	11262	86	9906	19	11952	20	24564	13	12303	5	11094	9	13217	3	27488	3	9450	7	9413
27	15	11996	33	9576	25	11323	86	6481	14	13289	16	16507	55	17755	6	11647	9	12077	5	17259	3	9500	7	9582
28	16	12015	32	9686	21	11126	56	6450	14	12723	14	13474	55	10849	6	11842	9	9770	182	8854	2	9599	6	12888
29	16	12279	34	10311	19	11399	46	7297			13	11025	27	9432	6	14136	9	15055	20	5915	2	9440	5	12728
30	19	13146	34	10500	22	11373	40	7928			14	10578	17	10976	5	13256	21	10364	9	11287	2	9438	5	11813
31	21	20548			27	11313	36	8682			13	10898			5	11750			230	5591	2	9475		
Avg.	85	3771	185	3224	30	11274	43	10894	23	11104	16	13202	19	14243	8	10620	40	8734	18	9215	40	3461	15	9307

DAILY FLOW AND CONTINUOUS RECORDED QUALITY DATA

PHS Station No.: 248
Location: Cimarron River near Waynoka, Okla.
Water Year: 1961

Basin: Arkansas River
Tributary to: Arkansas River
Remarks: Records poor. Occasional minor stratification.

Equations Used to Compute Constituents--
Chlorides: Log Cl =1.0922 Log Sp.C.-0.8173
Sulfates: SO_4=0.01915 Sp.C.+30
Dissolved Solids: DS =0.6445 Sp. C.

Discharge (cfs) and Specific Conductance, Micromhos/cm (μmhos)

	October		November		December		January		February		March		April		May		June		July		August		September	
Day	cfs	μmhos	cfs	μmhos	cfs	μmhos	cfs	μmhos	cfs	μmhos	cfs	μmhos	cfs	μmhos	cfs	μmhos	cfs	μmhos	cfs	μmhos	cfs	μmhos	cfs	μmhos
1	42	34000	183	19849	101	18017	135	18750	90	26673	124	15572	608	13000	55	26120	31	32727	13	21000	81	18000	85	22000
2	34	34000	128	22126	92	16369	134	18164	95	26431	107	17921	611	14000	50	26005	56	24082	9	22000	54	15565	85	23215
3	32	35935	152	23659	88	16553	106	18348	63	25317	95	19000	514	14100	50	27464	149	12923	11	22000	40	17157	85	26500
4	29	37884	117	16857	91	18942	108	18555	61	16633	101	18244	343	16500	3065	8670	161	16587	6	22000	60	32168	68	24000
5	22	37437	81	16740	96	24792	106	18741	32	10951	106	18000	216	15000	5630	6489	1526	19203	5	21500	118	30616	88	22500
6	17	38184	61	19011	94	26806	97	19928	41	11802	106	18569	240	16000	2025	8400	1660	8395	22	17000	89	17831	86	21000
7	13	38335	51	20000	94	23536	119	20707	88	16225	102	19000	227	17000	924	11000	1181	7550	19	15000	44	15921	89	19000
8	12	37442	48	24002	87	21124	139	18039	129	32642	103	21000	263	16000	796	13000	1696	7981	9	18220	18	19358	103	16498
9	11	35632	49	24275	80	21000	121	17024	166	33893	85	25000	597	17000	620	14000	1100	5996	343	36241	7	22796	445	11000
10	11	34762	46	28656	171	19019	113	16952	210	33949	87	25000	524	25000	418	16000	720	5700	332	18327	3	25635	159	8200
11	37	25502	49	26381	339	20140	119	17904	427	31351	86	23000	556	18000	303	17000	520	5862	618	17417	1	25008	97	15000
12	160	14920	49	24587	364	23149	124	18225	663	18456	97	23000	479	13500	159	18500	315	6508	639	11036	1	11060	113	18000
13	68	21709	53	24447	358	24627	125	18276	444	17517	93	22000	379	14344	102	20000	196	9305	609	12135	109	17142	174	14624
14	58	21297	67	26039	318	21320	128	18350	452	19645	92	22781	318	13000	86	21000	727	6010	890	10374	542	21796	101	24891
15	164	20161	77	24252	386	22715	127	19298	217	18642	88	20658	278	15000	54	23500	586	8461	890	9389	173	25297	50	36438
16	167	13153	77	22572	321	23939	118	19161	171	19069	162	13206	222	15200	55	21000	368	12172	513	8530	357	26620	28	32024
17	115	16728	71	23062	262	24560	119	19224	171	16543	776	10676	181	15500	144	13700	252	13300	471	7000	308	21019	20	31000
18	571	10922	72	21930	221	21809	115	18178	256	12880	1002	13823	157	16000	82	22000	209	15000	236	10200	342	18000	16	30500
19	507	14462	71	21000	196	22693	105	18524	212	18516	1007	11000	160	16500	56	29733	235	17000	150	21805	682	8300	15	30200
20	369	26733	71	21000	187	22685	90	19651	184	18297	747	9500	147	18000	45	25066	240	16329	125	11841	1283	11500	18	29820
21	344	19021	72	22134	150	23866	63	19015	211	17464	603	12200	128	19000	228	16122	214	15200	187	9522	1242	7462	18	30324
22	280	11139	73	22785	113	22907	61	19461	304	18500	520	13000	99	20000	241	25157	148	16000	196	11000	861	5802	16	33711
23	197	11813	72	22000	85	22536	58	21149	271	18000	424	14000	94	21000	127	35725	106	17000	170	13731	640	8174	11	36208
24	140	13604	71	23838	82	24026	37	24784	207	17000	341	16500	81	22500	85	19422	84	18000	140	18522	411	10209	13	30500
25	127	12264	75	22987	98	26782	13	28166	186	16000	256	15000	65	24000	113	28321	75	19500	567	7500	285	12000	13	33000
26	371	9617	79	22324	113	23379	23	24689	158	15000	209	16000	59	24615	133	27641	66	21500	521	5900	188	13000	80	42000
27	162	12393	92	21709	197	17895	32	24074	193	16500	189	16500	62	24022	98	26469	47	22000	286	10000	124	14200	35	25800
28	383	11694	173	21636	159	13365	37	23772	182	16800	173	17000	61	24100	65	28721	32	22000	173	12000	89	16000	21	29040
29	366	11193	163	23376	132	15348	48	25367			156	16576	60	24248	53	26531	22	21700	141	13000	85	17000	15	32856
30	286	11542	118	23117	126	18631	68	27705			153	15400	63	23803	42	28592	17	21500	121	14500	85	19000	11	34363
31	228	16571			131	19658	89	28666			351	11500			36	20336			108	16000	85	20000		
Avg.	176	15259	85	22170	172	24315	93	19630	203	19542	278	14075	260	16559	513	10710	426	9836	268	11055	274	12973	73	19727

DAILY FLOW AND CONTINUOUS RECORDED QUALITY DATA

PRS Station No.: 248
Location: Cimarron River near Waynoka, Okla.
Water Year: 1962

Basin: Arkansas River
Tributary to: Arkansas River
Remarks: Records poor. Occasional minor stratification

Equations Used to Compute Constituents:
Chlorides: Log Cl +1.0022 Log Sp.C.-0.8175
Sulfates: SO_4=0.0191$\frac{1}{2}$ Sp.C.+306
Dissolved Solids: DS =0.6445 Sp. C.

Discharge (cfs) and Specific Conductance, Micromhos/cm (μmhos)

Day	October		November		December		January		February		March		April		May		June		July		August		September	
	cfs	μmhos	cfs	μmhos	cfs	μmhos	cfs	μmhos	cfs	μmhos	cfs	μmhos	cfs	μmhos	cfs	μmhos	cfs	μmhos	cfs	μmhos	cfs	μmhos	cfs	μmhos
1	9	36610	325	24863	125	21831	187	37197	570	10400	68	26154	108	18890	168	34399	866	5561	388	8200	1027	7309	0	--
2	6	36767	364	22000	128	24058	234	37273	658	11000	103	24742	82	21959	124	23571	1581	18036	233	11300	977	13902	0	--
3	6	35596	561	16000	131	23338	269	35625	383	15800	118	28934	58	24927	83	24334	1946	24818	165	14000	975	9242	0	--
4	7	33623	380	15500	138	24260	255	35698	261	15000	143	30014	57	26000	68	27819	1253	17139	91	16446	534	2365	0	--
5	7	33987	262	15000	125	24500	251	36346	197	15534	156	23706	68	26273	50	32844	1170	12069	70	17210	386	8859	166	38565
6	5	32918	187	18672	110	22000	173	39518	160	17201	292	14615	125	27296	39	34093	2172	6466	69	20029	278	11052	99	26771
7	3	29636	137	19000	89	22500	229	39880	141	16529	221	10847	170	33397	29	35412	833	7430	793	12400	165	12251	50	29000
8	1	28121	110	19982	72	20000	245	31422	145	16838	169	12969	162	44840	20	37225	405	12695	484	6300	143	12750	41	28566
9	2	26349	103	21825	65	19200	162	29908	165	17643	137	16467	178	33224	14	38712	1211	14303	315	8950	110	13000	30	30665
10	8	25714	99	21650	61	32500	139	30001	167	18341	123	19120	176	20636	10	38536	1906	8767	265	16380	71	14800	28	32213
11	5	27699	93	23020	65	34000	213	30001	160	17734	132	20051	173	19310	7	38084	1768	8500	187	13860	50	15500	125	39557
12	5	28700	96	24000	71	36000	256	33343	162	18001	116	30564	150	22854	5	37218	842	8000	126	14615	39	16500	128	21000
13	6	29401	92	24044	80	28000	258	37806	157	18498	104	33315	140	26708	1	31903	617	8500	345	12897	32	17345	63	23000
14	12	29220	87	24873	90	34000	266	36251	146	18946	102	20938	119	26563	1	27888	447	8596	314	9397	28	18400	38	24000
15	12	37552	185	18593	99	46000	260	39126	159	19233	102	20406	89	22499	2	21536	352	9256	241	8434	25	19800	30	26000
16	12	38062	442	24637	100	45000	246	38295	177	20479	102	19563	69	25101	4	19439	351	15963	161	7775	28	21500	59	17300
17	11	41559	350	31057	92	42000	237	36725	191	25158	103	20987	65	27883	17	20246	303	18189	119	12729	20	22000	11038	11132
18	11	41945	500	16561	95	47000	159	36023	230	18961	110	21407	52	27184	8	24160	284	16972	66	24075	14	25000	3820	9482
19	10	40424	197	12113	112	39000	116	36616	197	13504	111	21100	44	30279	4	26448	238	19926	46	31324	10	27000	1359	6431
20	9	38912	315	15701	107	39200	107	37946	164	25000	111	21463	34	30672	3	22991	168	25316	29	32000	8	26951	5111	5642
21	9	36880	277	18132	132	35000	101	41538	141	25000	110	23435	22	32117	4	19406	139	26427	21	26000	6	27470	3831	7494
22	8	36655	255	18988	247	25000	103	49419	138	24000	101	25832	21	34958	3	19508	206	21133	18	28000	6	27924	1920	6768
23	5	37427	224	20704	353	16000	109	48098	126	23000	100	24577	15	36710	1	20994	711	13000	16	25500	5	30446	2066	5913
24	7	35762	192	21646	389	10500	127	43650	124	29000	109	23000	13	36217	1	21327	2506	7000	18	18989	4	28332	1076	6374
25	9	36874	175	21351	281	10700	182	38183	114	28000	132	22374	13	35000	0	--	1680	8626	18	6346	3	28695	1027	13106
26	5	36661	168	21000	248	15000	376	32296	84	27000	142	31291	14	33934	0	--	1351	7231	18	11700	2	30184	684	14181
27	6	33562	162	20760	215	14369	402	33105	53	26500	151	33582	142	21702	0	--	691	7500	590	3761	1	36418	445	11985
28	9	36291	148	20490	192	15258	385	26475	49	25500	206	26109	321	32000	1	18209	1119	11000	2530	1850	1	37995	323	12995
29	86	16000	141	20207	159	14690	515	17043			193	15711	175	35061	1	24234	1061	6000	1894	5400	0	--	238	14225
30	42	25000	130	20224	161	17215	611	10200			150	14531	126	39578	0	--	557	6000	1186	5600	0	--	191	14600
31	324	24000			178	17786	609	10500			122	17359			0	--			1752	4250	0	--		
Avg.	21	26150	239	19812	142	22602	251	25952	187	17866	134	21357	99	28546	22	29728	961	11205	405	6856	162	10583	1133	9623

DAILY FLOW AND CONTINUOUS RECORDED QUALITY DATA

PMS Station No.: 067
Location: Cimarron River near Buffalo, Oklahoma
Water Year: 1981

Basin: Arkansas River
Tributary to: Arkansas River
Remarks: Records poor. Occasional minor stratification at normal flows.

Equations Used to Compute Constituents--
Chlorides: Log Cl =1.1660 Log Sp.C.-1.1334
Sulfates: SO_4=0.0356 Sp. C.
Dissolved Solids: D° =0.6114 Sp. C.

Discharge (cfs) and Specific Conductance, Micromhos/cm (μmhos)

Day	October		November		December		January		February		March		April		May		June		July		August		September	
	cfs	μmhos	cfs	μmhos	cfs	μmhos	cfs	μmhos	cfs	μmhos	cfs	μmhos	cfs	μmhos	cfs	μmhos	cfs	μmhos	cfs	μmhos	cfs	μmhos	cfs	μmhos
1	-	-	88	4600	57	5800	88	4700	81	7000	55	4000	463	6191	18	9783	1	17465	2	8972	22	5095	52	4411
2	-	-	89	3700	36	5300	77	5146	122	3800	56	3619	262	5210	18	9700	1	20139	2	14463	67	18210	85	3532
3	-	-	78	3400	39	5100	69	4611	146	2750	61	3574	206	6315	18	7535	11	17082	1	17341	152	13096	98	1914
4	-	-	72	3084	43	4850	66	4662	59	3200	55	3939	151	5184	96	17234	1502	6908	1	17399	112	4252	100	1610
5	-	-	67	3570	43	4800	72	2315	25	3900	55	3732	148	7987	102	15088	1562	2751	0	17976	49	3201	100	1632
6	-	-	66	3200	61	4531	86	2370	24	9200	59	5155	150	7835	88	7850	935	3657	-	-	34	3642	99	1445
7	-	-	61	3830	67	4368	90	3292	47	32000	68	3902	169	6120	88	4250	2131	3003	-	-	28	4215	92	1651
8	-	-	61	4000	70	4613	84	3600	90	18905	61	3520	226	13631	58	5343	1025	1920	69	4164	25	4386	97	5077
9	-	-	61	4272	72	4262	84	3719	96	11483	56	2965	336	16782	34	8330	468	2178	202	3247	15	5540	97	2372
10	-	-	61	4425	86	7539	89	3730	268	9104	55	2800	263	5000	25	6843	296	2305	212	2950	10	7078	102	2096
11	-	-	62	4219	95	14992	85	4578	461	6572	55	3568	252	5600	22	7185	182	2375	112	3733	7	8493	75	2214
12	1	20936	68	3845	113	13126	83	3852	274	5690	56	4196	191	6285	19	6773	127	2737	160	3625	6	10377	53	6883
13	20	19345	72	3672	131	10500	88	4501	179	6616	53	4398	199	6423	15	9034	96	2968	146	2887	110	16993	17	19499
14	260	6000	72	4000	133	8900	88	3230	123	4184	55	5700	185	3709	11	10889	112	11880	326	7673	142	13232	11	9782
15	72	2000	72	4000	135	14799	88	4273	107	4400	58	4100	161	1636	9	10614	81	6350	338	3139	269	7060	11	7085
16	440	2200	72	4000	127	7500	88	4040	100	4453	109	5350	115	1512	9	11225	76	4324	207	2438	247	7274	12	6296
17	325	2200	68	4000	108	7750	88	4175	108	3591	736	11935	90	2750	10	13426	102	3849	166	2246	241	6801	10	5865
18	276	10000	66	4000	100	8000	87	4100	92	4020	951	2187	90	5500	8	26497	112	4228	131	2009	209	5816	9	7012
19	308	6670	65	4000	98	8000	79	4250	90	2662	611	3000	77	6065	8	17776	109	3161	68	2511	1432	7908	8	8146
20	285	1970	62	4000	98	8800	69	4250	92	2884	448	9200	96	6700	9	12994	66	3356	82	8842	1538	2815	8	8644
21	225	18045	61	4000	83	5650	69	5300	96	5800	402	7051	66	7000	13	22991	50	2700	91	12179	523	2309	8	14484
22	173	13915	61	4000	59	6800	55	5600	96	140645	309	5776	39	6219	15	20088	45	3500	1046	3686	356	5986	8	11475
23	190	19932	59	5192	56	8650	68	5600	83	7432	249	2766	36	6750	15	8350	37	4200	2044	5115	202	6018	9	6929
24	134	2500	59	4325	70	7723	55	3800	83	3834	216	2358	29	6800	16	6836	29	4566	746	2631	166	3749	14	5813
25	121	2650	59	4400	101	5202	60	3500	101	1979	196	2200	25	7000	17	14198	24	5082	275	2564	141	3829	8	15675
26	106	3500	60	6756	106	6200	66	6200	88	1700	175	2422	23	7000	13	12858	26	6231	150	2537	121	4090	8	10797
27	89	6000	64	6857	87	6500	52	6587	71	3200	160	3500	23	7600	11	7372	32	6926	95	2734	102	3592	8	8037
28	76	4250	69	13280	79	5023	58	6897	59	3920	154	4800	20	7988	11	7046	19	3983	63	3167	81	3948	8	6258
29	69	4700	66	5307	87	5077	55	8560			146	4601	20	6663	10	6621	9	5170	46	3558	69	4383	9	6788
30	68	6000	60	5663	93	5008	56	8900			160	4487	20	7405	8	8755	5	7115	35	3945	56	4876	7	7071
31	71	9102			89	4870	56	8700			370	8905			3	12759			30	4378	54	4998		
Avg.	113	6353	67	4610	87	7376	72	6676	121	6178	201	5351	138	6737	26	10634	309	3700	221	4969	213	5671	41	3624

DAILY FLOW AND CONTINUOUS RECORDED QUALITY DATA

PWS Station No.: 842
Location: Cimarron River near Buffalo, Oklahoma
Water Year: 1962

Basin: Arkansas River
Tributary to: Arkansas River
Remarks: Records poor. Occasional minor stratification at normal flows.

Equations Used to Compute Constituents:
Chlorides: Log Cl =1.1660 Log Sp.C.-1.1334
Sulfates: SO_4=0.0356 Sp. C.
Dissolved Solids: DS =0.6114 Sp. C.

Discharge (cfs) and Specific Conductance, Micromhos/cm (μmhos)

Day	October		November		December		January		February		March		April		May		June		July		August		September	
	cfs	μmhos	cfs	μmhos	cfs	μmhos	cfs	μmhos	cfs	μmhos	cfs	μmhos	cfs	μmhos	cfs	μmhos	cfs	μmhos	cfs	μmhos	cfs	μmhos	cfs	μmhos
1	7	7823	757	5991	135	69..	112	3867	108	4120	130	9832	68	5337	20	5709	312	23000	147	2812	1238	12226	2	20197
2	7	8244	426	5000	141	6430	104	4378	89	4686	61	6922	60	5601	16	6222	1202	23000	126	3149	716	6272	4	18405
3	6	10157	239	6000	148	6251	98	5219	98	5476	76	6496	62	5677	14	6656	1230	13000	96	5771	261	5229	14	25208
4	7	12063	160	3500	143	7313	97	5583	94	5840	132	4286	70	5360	14	10785	600	9500	78	8107	186	5087	49	10000
5	7	13633	119	3199	125	5913	102	6686	88	5560	161	3029	78	19801	12	15867	306	6265	395	12193	141	4464	26	8160
6	7	14703	107	3510	122	5159	100	6163	83	6265	125	3063	93	24920	11	9751	201	6061	956	4267	120	4974	30	7996
7	8	14897	105	3865	120	4813	97	7647	84	4835	107	4172	108	13538	10	11706	168	5936	258	3288	100	4766	27	8234
8	8	14982	100	4002	93	4722	77	5883	83	5839	97	4077	102	8166	12	23975	1246	15315	219	3832	78	4522	24	12708
9	9	15430	95	4200	79	28600	56	9516	88	6213	87	5168	97	6863	7	28340	1851	11115	209	4831	61	5311	20	11337
10	9	10737	93	4900	82	16000	56	18765	96	5379	91	5489	-	6395	5	19566	1559	5296	177	4891	46	5535	78	6880
11	8	28000	87	5600	55	12000	56	9639	87	5409	97	5891	90	13382	4	19117	603	5273	293	4167	37	5977	66	5523
12	13	28500	78	5199	50	12000	47	11550	85	5923	98	5906	82	5983	3	20393	375	6585	355	2612	29	7035	55	5835
13	15	8950	76	5104	46	12000	31	15563	87	5886	95	6164	71	5180	1	21919	284	6300	301	1923	19	8600	49	5720
14	15	5820	79	6283	39	13000	19	16539	88	5379	85	3896	66	5977	1	21863	212	6203	249	2712	14	11000	43	7281
15	14	6008	161	8718	36	15000	16	16939	103	13700	80	6286	57	6350	1	19541	206	11162	182	10196	10	13159	40	10884
16	11	6353	266	7765	36	15500	11	10061	119	5936	83	6881	51	5347	1	18835	158	6510	123	6250	8	16660	292	2561
17	10	6524	270	6017	37	15500	10	10077	123	6491	88	6331	46	6786	2	19120	136	5146	105	6875	6	18306	3598	6096
18	10	6360	167	5332	60	15200	9	13825	111	6455	87	6709	60	7858	2	18600	134	8053	94	7500	4	20180	1062	2572
19	10	6388	163	6866	63	13000	11	22187	109	6181	82	6079	37	7313	1	18160	137	14581	85	7300	3	21515	493	3654
20	10	6214	160	6100	53	6500	16	18685	110	6136	86	6833	33	8814	-	17217	136	6661	74	7000	2	21288	2187	5821
21	10	7122	139	6276	46	3628	22	19186	113	5886	75	7030	29	8735	0	18196	125	9015	84	6900	1	21076	1694	6051
22	12	6578	130	8162	98	5170	28	21932	118	5337	72	6321	27	7066	-	-	191	17594	65	7000	0	22158	1561	2933
23	18	5916	122	6378	119	3677	31	15663	119	5318	76	5627	26	10057	-	-	1067	10227	54	7300	0	23071	490	3613
24	19	6192	126	5715	132	3634	39	19576	86	5721	82	7118	25	6688	-	-	1027	9104	1027	19500	0	-	470	9465
25	20	5822	119	5639	129	4730	31	25372	68	6871	89	22692	23	6971	-	-	866	6283	2537	5147	-	-	484	5812
26	22	6160	121	6326	83	5397	92	25782	67	8603	109	5653	26	9589	-	-	303	3473	1267	2298	-	-	329	5375
27	28	6362	126	5736	86	6600	113	10536	121	10138	122	3688	32	32976	-	-	1279	6172	898	3611	-	-	260	5925
28	39	5718	122	5035	70	6286	183	8403	492	9260	110	3429	28	16587	-	-	654	1913	1640	3978	-	-	223	6051
29	39	5349	126	6292	79	6967	217	6816			100	6078	33	6176	-	-	283	2207	1712	3588	-	-	198	5561
30	41	18062	132	6092	72	6965	280	6332			91	6921	27	5807	-	-	190	2803	765	3393	-	-	282	3600
31	233	26976			83	5879	218	5762			81	6865			15	19533			647	7860	0	19353		
Avg.	23	15083	164	5535	87	7735	77	8483	111	6369	95	5636	56	9639	5	13678	566	9656	470	5571	100	8630	470	6396

DAILY FLOW AND CONTINUOUS RECORDED QUALITY DATA

USGS Station No.: 779
Location: Cimarron River at Protection, Kansas
Water Year: 1961

Basin:
Tributary to: Arkansas River
Remarks: Arkansas River
Records fair. Occasional minor stratification.

Equations Used to Compute Constituents--
Chlorides: Cl =0.2577 Sp. C.
Sulfates: SO_4=0.0941 Sp. C.
Dissolved Solids: DS =0.5804 Sp. C.

Discharge (cfs) and Specific Conductance, Micromhos/cm (μmhos)

Day	October		November		December		January		February		March		April		May		June		July		August		September	
	cfs	μmhos	cfs	μmhos	cfs	μmhos	cfs	μmhos	cfs	μmhos	cfs	μmhos	cfs	μmhos	cfs	μmhos	cfs	μmhos	cfs	μmhos	cfs	μmhos	cfs	μmhos
1																	1		2		22	2696	52	2358
2																	1		2		67	2105	85	2365
3																			1		152	1868	98	2627
4																	11		1					
5																	1502		1		112	1836	100	2638
6																	1362		-		69	1881	100	2656
7																	935				35	2177	99	2689
8																	2131				28	2292	92	2805
9																	1025		69		25	2304	97	2800
10																	648		202		15	2393	97	2796
11																	294		212		10	2378	102	2717
12																	182		112	1569	7	1337	75	2695
13																	127		100	1288	6	35	53	2612
14																	96		166	1633	113	1777	17	2833
15																	112	2774	326	1316	163	1805	11	2887
16																	81	2671	338	1893	208	1726	11	2900
17																	76	2670	307	1360	247		12	2895
18																	102	2520	144	1620	261		10	2891
19																	112	2338	151	1626	209		9	2819
20																	109	2204	68		1632		8	2557
21																	66	2708	82		1558		9	2875
22																	50	2921	91		323		8	2845
23																	65	2864	1040		334		8	2557
24																	37	2939	2064		202		9	2353
25																	29	2886	746		166		14	2704
26																	24	2535	275		141		8	2083
27																	26	2214	150		121		8	2375
28																	32		95		102		8	2819
29																	19		63		81		8	2800
30																	9		44		66	2500	9	2801
31																	31		33		56	2537	7	
Avg.																	309	2524	221	1674	215	1984	41	2682

DAILY FLOW AND CONTINUOUS RECORDED QUALITY DATA

PHS Station No.: 773
Location: Cimarron River at Protection, Kansas
Water Year: 1962

Basin: Arkansas River
Tributary to: Arkansas River
Remarks: Records fair. Occasional minor stratification.

Equations Used to Compute Constituents--
Chlorides: Cl =0.2577 Sp. C.
Sulfates: SO_4=0.0941 Sp. C.
Dissolved Solids: DS =0.5884 Sp. C.

Discharge (cfs) and Specific Conductance, Micromhos/cm (μmhos)

Day	October		November		December		January		February		March		April		May		June		July		August		September	
	cfs	μmhos	cfs	μmhos	cfs	μmhos	cfs	μmhos	cfs	μmhos	cfs	μmhos	cfs	μmhos	cfs	μmhos	cfs	μmhos	cfs	μmhos	cfs	μmhos	cfs	μmhos
1	7	2900	757	1877	134	2903	112	2800	108	2059	130	3507	68	3400	20	3695	312	1420	147	2248	1258	860	2	2920
2	7	2950	426	2421	141	2852	104	2800	89	2391	61	3230	60	3450	16	3750	1202	1882	124	2450	716	1000	4	2725
3	6	3000	239	2702	148	2803	98	2700	98	2539	76	2902	62	4298	14	3812	1250	2116	96	2700	261	1313	14	2208
4	7	3013	160	2790	143	2812	97	2669	94	2606	132	2552	70	3574	14	3900	600	2488	78	2427	186	1500	49	2354
5	7	3055	119	2820	124	2885	102	2710	88	2603	161	2289	78	3147	12	3876	306	2661	395	1040	141	1575	36	2505
6	7	3032	107	2808	122	2915	100	2901	83	2701	125	2372	95	3087	11	3800	201	2761	954	769	120	1700	30	2798
7	8	3040	105	2836	120	2860	97	2883	84	2710	107	2548	108	3241	10	3791	148	2908	258	1690	100	1858	27	2764
8	8	3065	100	2813	93	2775	77	2800	83	2710	97	2691	102	3079	12	3866	1246	815	219	2150	78	1965	26	2751
9	9	2939	95	2831	79	2559	54	2961	88	2703	87	2795	97	3268	7	3771	1841	1278	209	2500	61	2118	90	1800
10	9	2929	93	2873	62	2673	54	3421	94	2725	91	2798	92	3395	5	3786	1559	1422	177	2800	48	2255	78	1715
11	8	3125	87	2864	55	2937	54	3734	87	2788	97	2778	90	2626	4	3853	603	1995	293	1535	37	2452	66	1828
12	10	3111	78	2851	50	3195	47	3916	85	2785	98	2786	82	2911	3	3799	375	2381	355	1044	27	2547	55	2297
13	15	3006	76	2793	44	3461	31	3795	87	2856	96	2800	71	3229	1	3744	264	2432	301	1002	19	2694	49	2351
14	15	2925	79	2835	39	3555	19	3416	88	2868	85	2778	64	3381	1	3666	212	2661	249	1077	14	2781	43	2448
15	14	2823	142	2486	54	3559	14	3289	103	2718	80	2651	57	3478	1	3538	204	2844	182	1242	10	2752	40	2454
16	15	2797	266	2502	56	3313	11	3208	119	2662	83	2800	51	3542	1	3486	158	2933	123	1437	8	2891	292	756
17	16	2798	270	2725	57	3110	10	3185	123	2713	88	2800	46	3657	2	3505	136	3000	104	1676	6	3000	3498	453
18	16	2810	167	2881	60	3000	9	3200	111	2812	87	2800	40	3678	2	3621	134	3016	94	1910	4	3000	1042	1138
19	16	2870	143	2800	63	3088	11	3200	109	2906	82	2843	37	3736	1	3600	137	2967	85	2169	3	3000	493	1581
20	16	2913	140	2778	53	2989	16	3287	110	2926	84	2904	33	3905	0	3600	136	2863	74	2348	2	3042	2187	846
21	16	2922	139	2803	64	2770	22	3580	113	2888	75	2853	29	3900	0	3600	125	2752	84	1434	1	3220	1694	847
22	17	2869	130	2810	98	2218	28	3808	118	2871	77	2924	27	3800	-	-	191	2573	65	1939	0	3257	1561	1000
23	18	2913	122	2825	119	2233	31	4040	119	2871	76	3050	26	3775	-	-	1047	1365	44	2450	0	3131	490	1175
24	19	2920	126	2890	132	2459	39	4133	86	2809	82	2958	24	3700	-	-	1027	1147	1027	888	-	-	470	1600
25	20	2902	119	2895	129	2565	51	3629	68	2877	90	2895	23	3633	-	-	844	1380	2437	920	-	-	484	1909
26	22	2903	121	2835	85	2593	97	2929	47	3098	109	2845	24	3617	-	-	303	1707	1267	900	-	-	329	2017
27	28	2891	124	2840	64	2700	113	2649	121	3337	122	2768	32	3382	-	-	1280	1633	898	950	-	-	260	2184
28	39	2855	122	2893	70	2800	184	2230	497	3513	110	2929	26	3663	-	-	654	1620	1640	760	-	-	223	2287
29	39	2832	126	2981	79	2800	217	1916			100	3535	33	3496	-	-	283	1759	1212	760	-	-	199	2359
30	61	2557	132	2980	72	2800	280	1737			91	3250	27	3551	-	-	190	2008	745	785	-	-	282	1898
31	233	2169			83	2800	218	1761			81	3325			15	2091			647	785	1	2888		
Avg.	23	2640	164	2618	87	2804	77	2614	111	2880	95	2847	56	3379	5	3621	566	1730	470	1057	100	1217	470	1060

DAILY FLOW AND CONTINUOUS RECORDED QUALITY DATA

PHS Station No.: 246
Location: Cimarron River near Mocane, Oklahoma
Water Year: 1961

Basin: Arkansas River
Tributary to: Arkansas River
Remarks: Records poor. Occasional minor stratification.

Equations Used to Compute Constituents--
Chlorides: Cl =0.2627 Sp. C.
Sulfates: SO_4=0.0807 Sp. C.
Dissolved Solids: DS =0.5884 Sp. C.

Discharge (cfs) and Specific Conductance, Micromhos/cm (μmhos)

Day	October		November		December		January		February		March		April		May		June		July		August		September	
	cfs	μmhos	cfs	μmhos	cfs	μmhos	cfs	μmhos	cfs	μmhos	cfs	μmhos	cfs	μmhos	cfs	μmhos	cfs	μmhos	cfs	μmhos	cfs	μmhos	cfs	μmhos
1	43	2350	54	2450	50	2290	126	2050	92	1708	31	2118	93	2263	42	2150	28	2300	32	1950	58	1950		
2	41	2400	58	2450	52	2264	134	2000	40	1643	30	2169	82	2210	40	2150	30	2298	51	2452	92	1950		
3	51	2450	65	2480	55	2293	107	2100	17	1800	37	2200	82	2224	54	2150	56	2072	50	2149	89	2000		
4	52	2450	43	2480	49	2291	71	2197	18	1800	57	2100	73	2200	102	2250	121	1950	38	1900	78	2000		
5	48	2450	32	2449	51	2320	96	2300	56	2000	83	2100	77	2301	89	1800	67	1950	29	1800	57	2000		
6	44	2478	40	2393	69	2298	97	2100	134	2533	88	2200	66	2214	54	1800	804	2400	23	2010	42	2000		
7	46	2420	41	2315	112	2297	150	2150	199	2250	93	2150	66	2109	52	1900	176	2200	23	2094	38	2000		
8	41	2305	36	2357	59	2315	167	2200	205	2039	87	2155	91	2084	80	2000	190	2000	451	1300	38	2000		
9	43	2167	49	2181	64	2224	137	2300	232	2060	75	2144	71	2200	66	2200	70	1950	125	1750	37	2015		
10	45	2067	38	2256	84	2245	50	2225	254	2423	68	2164	51	2200	53	2200	45	1900	86	1775	45	2030		
11	43	1948	41	2510	91	2328	66	2135	157	2338	79	2141	66	2300	42	2200	38	1900	40	1800	44	1980		
12	49	1881	39	2416	88	2465	114	2100	107	2125	102	2129	64	2400	40	2200	54	1850	72	2259	43	1997		
13	51	1813	48	2365	93	2460	127	2000	77	2076	94	2113	55	2300	40	2200	63	1950	189	1596	227	1671		
14	51	1623	56	2272	53	2499	137	2100	47	2100	75	2100	71	2200	41	2282	67	2000	125	1343	231	1693		
15	157	1371	54	2329	41	2433	99	2150	41	2100	72	2100	69	2200	52	2200	82	2000	105	1662	165	1650		
16	75	1966	65	2309	78	2378	75	2200	60	2100	116	2000	62	2276	67	2200	89	1967	173	1700	159	1750		
17	44	1635	68	2441	57	2244	98	2300	65	2100	271	2300	73	2150	69	2100	78	1985	65	1707	80	1900		
18	83	1706	68	2500	64	2190	108	2299	59	2100	108	2300	89	2150	69	2032	48	1972	43	1576	321	2800		
19	88	1750	71	2479	53	2300	99	2250	73	2100	151	2500	83	2200	69	1958	39	2000	44	1550	543	2600		
20	44	1850	77	2394	56	2500	86	2282	61	2100	189	2700	57	2200	72	1996	43	2078	76	1750	179	2400		
21	55	2050	69	2261	33	2339	67	2350	68	2100	171	2700	42	2200	116	1997	44	2140	110	1978	133	2200		
22	58	2150	67	2304	52	2405	62	2250	69	2100	144	2611	43	2200	99	1975	32	2100	296	1600	120	2000		
23	50	2250	60	2330	90	2111	67	2166	78	2100	116	2454	55	2250	95	2188	30	2054	212	1550	111	2000		
24	51	2400	50	2317	54	2157	39	2276	65	2100	92	2383	58	2250	93	2227	35	2100	108	1550	109	2000		
25	49	2500	63	2347	41	2235	27	2858	71	2100	79	2403	59	2250	114	2301	41	2117	73	1550	100	2000		
26	50	2500	55	2350	43	2197	35	3101	57	2100	65	2262	56	2202	132	2223	36	2046	69	1600	91	2000		
27	72	2500	68	2318	42	2193	61	3335	65	2100	55	2154	51	2200	97	2196	30	2088	64	1650	86	2000		
28	73	2500	63	2191	95	2150	94	2755	58	2100	65	2200	44	2200	54	2150	31	2097	62	1700	85	2000		
29	91	2450	39	2214	111	2100	113	2516			80	2200	43	2200	42	2150	27	2050	68	1750	85	2000		
30	96	2450	43	2337	129	2100	116	2228			100	2238	42	2200	33	2200	25	2000	62	1850	85	2000		
31	58	2450			110	2100	118	1935			114	2453			32	2195					85	2000		
Avg.	59	2126	54	2361	68	2267	95	2239	90	2146	96	2310	64	2216	68	2087	84	2147	98	1653	118	2116		

DAILY FLOW AND CONTINUOUS RECORDED QUALITY DATA

PHS Station No.: 238
Location: Arkansas River at Ralston, Oklahoma
Water Year: 1961

Basin: Arkansas River
Tributary to: --
Remarks: Records good. Stratification usually increases with increase in flow.

Equations Used to Compute Constituents--
Chlorides: Log Cl = 1.3496 Log Sp.C.-1.7704
Sulfates: SO_4 = 0.1037 Sp. C.
Dissolved Solids: DS = 0.6000 Sp. C.

Discharge (cfs) and Specific Conductance, Micrombos/cm (umhos)

Day	October		November		December		January		February		March		April		May		June		July		August		September	
	cfs	umhos	cfs	umhos	cfs	umhos	cfs	umhos	cfs	umhos	cfs	umhos	cfs	umhos	cfs	umhos	cfs	umhos	cfs	umhos	cfs	umhos	cfs	umhos
1	3500	738	12791	779	1926	2039	2109	2000	1951	2300	2291	1824	8775	789	5976	848	4828	1597	2901	1822	4560	1117	4530	1357
2	2823	880	19125	454	2004	2065	2041	1828	1898	2308	2200	1876	8013	1120	22842	585	4829	1497	2713	1852	4100	1213	4115	1541
3	2304	1086	12944	403	1931	2005	2020	1588	1873	2325	2130	1910	8050	1330	17193	401	7732	976	2550	1859	3725	1309	3850	1641
4	1965	1386	8094	468	1890	1965	1960	1665	1857	2350	2120	1905	7270	1291	14996	430	7311	1381	2450	1903	3458	1338	3863	1573
5	1744	1535	5771	637	1806	1920	1946	2200	1774	2375	2249	1951	6053	1349	19304	415	6940	1253	2361	2022	3025	1338	3725	1581
6	1568	1658	4596	823	1756	1913	1918	2225	1716	2400	4297	856	5164	1608	49788	395	6460	1451	2290	2031	2715	1371	3825	1597
7	1433	1734	4015	1019	1763	1977	1876	2250	1640	2425	2528	1231	4546	1799	115869	231	8296	1388	3234	1654	2508	1412	5131	1251
8	1326	1735	3613	1275	1846	2028	1870	2275	1560	2450	2197	1748	4128	1872	153863	239	6945	1340	3263	1474	2293	1486	4794	991
9	1263	1631	3300	1470	1925	2045	1868	2300	1480	2475	2051	1836	4281	1819	139029	263	12097	1110	4364	1762	2118	1550	6330	1011
10	1214	1860	3013	1557	2069	1986	1850	2300	1418	2169	2030	1863	5992	1633	64413	397	11775	742	4075	1247	2315	1546	6568	914
11	1151	1813	2803	1624	2419	1746	1829	2300	1463	2217	2030	1904	9200	1168	28713	623	8300	1033	2813	1165	2363	1535	4213	1009
12	1100	1813	2633	1687	2599	1723	1801	2275	1540	2160	2010	2024	12200	942	21500	790	7015	1242	2510	1240	2197	1318	3831	1053
13	1109	1813	2539	1717	3063	1750	1779	2275	1619	2027	1884	2050	11300	730	17050	991	6090	1425	3446	1337	3453	929	34879	262
14	1114	1765	2450	1730	5364	1660	1750	2250	1683	2098	1818	1920	9390	712	13588	1157	8734	1115	6289	792	13690	260	99229	241
15	1182	1686	2361	1767	5905	1393	1721	2250	1709	2105	1755	1915	8014	925	11463	1322	6764	1371	7028	730	16994	709	68363	251
16	4484	1452	2280	1818	4280	1186	1698	2225	1780	2086	1738	1910	6858	1092	10000	1425	9557	1340	7547	830	16450	455	38400	304
17	6850	664	2210	1857	3425	1189	1665	2225	1941	2046	1831	1900	5723	1321	9125	1450	11600	921	6003	833	9475	427	25725	288
18	5453	612	2200	1888	3014	1396	1660	2200	1965	1977	1935	1880	5036	1570	8013	1400	9394	855	4661	1019	7123	587	14175	380
19	4920	768	2190	1888	2735	1524	1658	2220	2197	1955	1947	1850	4343	1715	7488	1400	7286	1089	4019	1073	5808	972	8569	566
20	5338	888	2130	1880	2621	1616	1638	2240	2395	2011	1948	1825	4215	1773	7063	1450	6259	1562	3300	966	5315	1979	7068	699
21	5978	1065	2109	1880	2528	1612	1739	2260	6374	1636	2370	1800	4000	1815	9240	1050	5815	1780	3478	1045	11290	952	6189	774
22	5361	921	2031	1925	2383	1722	1635	2280	6183	1148	3479	1650	3825	1803	15650	720	5604	1798	5329	1072	12967	679	12861	629
23	4350	987	1960	2230	2330	1832	1600	2300	4150	1042	4573	1350	3894	1835	23808	690	5150	1721	14778	699	14419	681	12575	529
24	3625	1219	1941	1930	2150	1910	1560	2098	3375	1168	5735	1200	4685	1654	18550	725	4669	1655	28175	384	17850	911	8475	662
25	3114	1348	1888	1930	2099	1965	1521	2238	3025	1372	5865	1150	5355	1636	14450	855	4294	1692	33125	289	17188	647	6537	771
26	2714	1693	1871	1938	1971	2030	1508	2272	2803	1561	4905	1200	5200	1426	12950	985	3925	1735	30100	250	11988	788	7534	901
27	2692	1741	1864	1963	1950	2109	1595	2316	2621	1673	4465	1350	4550	1395	9738	842	3700	1797	22988	260	8763	1210	13443	840
28	10990	855	1824	1952	1971	2130	1661	2384	2450	1748	3900	1600	4015	1517	7510	1201	3500	1836	11770	353	7345	1455	12031	644
29	10530	599	1803	1935	2099	2065	1674	2467			14464	800	3625	1604	6736	1415	3300	1878	7720	354	6480	1480	10367	684
30	8264	615	1816	1935	2120	2001	1696	2290			17642	484	3506	1672	6061	1491	3100	1841	6279	814	5770	1335	8581	721
31	7124	818			2120	1991	1705	2221			13075	454			5420	1576			5299	1004	5053	1273		
Avg.	3761	1015	4005	1108	2518	1749	1760	2191	2373	1823	3983	1209	6053	1312	27980	656	6709	1311	7963	685	7509	900	14956	494

DAILY FLOW AND CONTINUOUS RECORDED QUALITY DATA

PHS Station No.: 238
Location: Arkansas River at Ralston, Oklahoma
Water Year: 1962

Basin: Arkansas River
Tributary to: --
Remarks: Records good. Stratification usually increases with increase in flow.

Equations Used to Compute Constituents--
Chlorides: Log Cl = 1.3496 Log Sp.C.-1.7704
Sulfates: SO_4= 0.1037 Sp. C.
Dissolved Solids: DS = 0.6000 Sp. C.

Discharge (cfs) and Specific Conductance, Micromhos/cm (μmhos)

Day	October		November		December		January		February		March		April		May		June		July		August		September	
	cfs	μmhos	cfs	μmhos	cfs	μmhos	cfs	μmhos	cfs	μmhos	cfs	μmhos	cfs	μmhos	cfs	μmhos	cfs	μmhos	cfs	μmhos	cfs	μmhos	cfs	μmhos
1	4813	844	4718	1540	6190	1658	4244	1666	22100	526	3250	1700	3025	1773	3525	1811	12654	753	3388	1389	4630	1248	2098	1378
2	5411	1099	28494	553	5936	1674	4113	1713	20075	524	3013	1731	2825	1805	3388	1701	11808	378	2928	1497	6417	1228	2021	1169
3	5769	1307	74700	348	5765	1682	4088	1746	17275	624	2938	1840	2800	1829	3076	1894	9125	416	2623	1582	6950	1140	2181	1023
4	5278	1342	94475	250	5538	1695	4013	1767	14188	742	3483	1875	2800	1788	2748	2037	22003	439	2383	1668	6323	1080	1940	1107
5	4563	1361	57800	275	5384	1700	4025	1756	11175	799	3700	1900	2800	1813	2621	2192	29404	407	2270	1756	5769	1155	1979	1318
6	4103	1428	32313	350	5165	1711	4175	1750	9244	945	3688	1900	2800	1838	2528	2377	26000	407	2118	1780	5245	1372	3285	1366
7	3713	1562	19475	511	5006	1725	4200	1750	7820	1124	3625	1875	2789	1800	2373	2308	21448	500	2239	1704	5310	1563	3915	935
8	3413	1567	13825	723	4898	1728	4050	1739	6888	1283	3663	1830	2721	1825	2280	2194	16450	640	11297	911	5638	1372	4255	985
9	3258	1594	11369	943	6348	1560	3088	1800	6223	1391	3513	1842	2710	1856	2200	2180	15954	710	9763	598	5954	1065	4154	987
10	8525	884	9650	1145	7825	1521	2500	1940	5784	1503	3400	1902	2710	1844	2109	2225	15581	830	10564	490	6088	917	3650	927
11	57590	511	8575	1294	8412	1451	2075	1912	5433	1542	3313	1890	2710	1814	1959	2250	12700	940	8767	520	5385	1018	3613	959
12	63842	289	8050	1400	7421	1335	2138	1897	5263	1592	3300	1853	2699	1889	1850	2238	10088	1120	8759	490	4578	1111	3688	978
13	45750	305	7656	1487	6331	1375	2488	1905	5038	1645	3313	1918	2631	1900	1751	2225	8725	1400	9618	485	4090	1316	3638	951
14	38754	311	7563	1506	5348	1360	2738	1902	4915	1674	3400	1910	2610	1900	1669	2219	7368	1540	7150	490	3625	1437	3213	918
15	25800	325	10544	1011	4723	1384	2613	1904	4915	1713	3463	1900	2539	1900	1639	2238	6498	1710	5516	520	3300	1489	2818	983
16	16450	451	18500	246	4949	1454	2513	1970	5005	1730	3313	1900	2461	1900	1605	2201	6193	1880	5404	665	3001	1520	2550	1142
17	11838	574	22900	860	6685	1486	2525	2000	5132	1731	3200	1900	2439	1895	1543	2181	5639	1975	12013	460	2725	1550	4222	1097
18	8354	675	27329	596	9806	1341	2588	1973	6560	1681	3100	1900	2371	1906	1489	2300	5036	2000	10710	430	2539	1567	12600	448
19	6795	893	23375	459	10467	1148	2025	1895	6581	1481	3013	1900	2350	1938	1433	2300	4530	2000	9706	450	2373	1600	9005	381
20	5820	1058	16675	516	11267	1184	1600	1919	5706	1489	3000	1900	2290	1962	1391	2263	4115	1995	7976	465	2280	1605	6176	417
21	5166	1199	13538	660	9294	1070	1738	2000	5166	1552	2988	1900	2290	2005	1349	2250	3813	1946	6873	490	2210	1620	4188	610
22	4656	1307	12350	801	7303	1140	1613	2000	4794	1597	2913	1900	2340	2083	1281	2243	3625	1875	5910	560	2190	1676	5860	1047
23	4231	1397	10369	1013	6374	1250	1550	2002	4525	1650	2900	1913	2280	2063	1269	2218	3563	1863	4933	600	2119	1703	6748	725
24	3988	1440	9523	1197	5936	1350	1850	2005	4315	1700	3342	1906	2210	2043	1291	2216	3363	1813	4926	670	2041	1689	16369	576
25	3713	1440	8710	1330	5653	1450	2536	1992	4200	1750	3863	1760	2220	2084	1274	2238	3550	1835	6650	800	2020	1717	15500	352
26	3500	1460	8035	1424	5400	1550	3450	1913	4100	1800	4038	1647	2330	2002	1270	2225	4192	1692	9748	500	1970	1718	9419	392
27	3298	1525	7339	1464	5165	1650	4288	1831	3988	1750	3500	1745	2300	1889	1263	2200	3675	1571	7115	456	2063	1700	7938	550
28	3125	1565	6883	1536	5006	1700	6538	1750	3750	1700	3298	1719	2350	1780	1298	2168	3619	1587	5771	587	2856	1150	7384	673
29	3000	1550	6615	1598	4810	1606	12100	1250			4044	1679	2557	1833	1465	2071	3808	1521	5136	839	2653	1200	6378	786
30	2973	1566	6444	1642	4764	1600	21325	780			3500	1652	2914	1910	2873	1918	3725	1539	4926	1072	2171	1403	5671	940
31	3314	1467			4610	1602	23763	620			3200	1700			2595	1330			4595	937	2053	1338		
Avg.	11961	630	19593	618	6380	1451	4598	1426	7506	1157	3363	1832	2563	1889	1948	2098	9608	927	6509	827	3760	1315	5548	717

DAILY FLOW AND CONTINUOUS RECORDED QUALITY DATA

PHS Station No.: 236
Location: Salt Fork Arkansas River at Tonkawa, Okla.
Water Year: 1961

Basin: Arkansas River
Tributary to: Arkansas River
Remarks: Record very good. Occasional minor stratification.

Equations Used to Compute Constituents--
Chlorides: Log Cl =1.1425 Log Sp.C.-1.0569
Sulfates: SO_4=0.0853 Sp. C.
Dissolved Solids: DS =0.5997 Sp. C.

Discharge (cfs) and Specific Conductance, Micromhos/cm (μmhos)

Day	October		November		December		January		February		March		April		May		June		July		August		September	
	cfs	μmhos	cfs	μmhos	cfs	μmhos	cfs	μmhos	cfs	μmhos	cfs	μmhos	cfs	μmhos	cfs	μmhos	cfs	μmhos	cfs	μmhos	cfs	μmhos	cfs	μmhos
1	335	4125	2618	1503	296	4106	337	4390	297	4027	253	4517	1212	4154	371	3943	540	3700	280	4200	247	4373	1048	3389
2	301	4138	1955	1283	256	3827	327	4378	243	4070	277	4497	2655	2624	423	4124	535	3644	273	4197	206	4391	846	3512
3	262	4050	1378	1457	236	3878	323	4285	212	4145	296	4580	1862	2600	508	3574	1229	1744	304	4019	196	4381	789	3598
4	234	4354	1376	1706	255	4054	321	4270	216	4331	269	4559	1368	3087	420	2859	1234	1915	236	4117	182	4301	707	3391
5	213	4405	827	1840	240	4158	297	4290	233	4400	248	4420	1073	4282	1217	1890	1238	2268	205	4205	135	4646	554	3765
6	194	4395	649	1958	242	4179	322	4294	248	4395	242	4432	899	4493	2525	1483	1361	3115	200	4001	119	4692	472	3875
7	182	4343	580	2370	241	4272	298	4137	271	4369	209	4284	815	4480	3815	2245	1516	3175	767	2175	110	4388	772	2701
8	171	4231	537	3045	211	4278	289	4000	275	4408	215	4345	770	4608	9347	1751	1736	3419	468	1574	105	3873	2769	759
9	151	4192	463	3524	219	4225	273	4000	278	4400	267	4411	850	3776	13138	1438	1890	2847	175	2545	102	4024	764	1767
10	142	4206	407	3933	236	4168	274	3975	283	4410	272	4583	1271	3371	8109	1611	1934	2264	138	3708	100	4457	427	3072
11	135	4407	362	3881	296	3912	278	3985	291	4420	173	4254	1339	3075	4810	2469	1506	2840	119	3998	98	4685	445	2762
12	130	4387	357	3797	638	3694	277	4062	305	4420	154	4170	1005	3433	3363	3123	1196	3365	126	3997	116	4542	623	1976
13	175	4254	343	3943	1133	2337	271	4142	311	4375	136	4311	924	4533	2486	3376	931	3795	123	3939	332	3019	17027	325
14	766	2725	335	4077	949	2147	268	4100	322	4260	149	4436	776	4777	2045	3366	839	3883	1117	987	953	1184	6638	416
15	966	1921	328	4167	737	2957	274	4000	328	4215	167	4460	695	4900	1728	3392	1436	2645	3141	465	805	1343	2223	1084
16	1170	1609	316	4098	648	3597	281	3974	321	4203	124	4351	683	5000	1471	3521	2007	2107	1306	701	583	1581	1493	1632
17	831	2158	323	4050	596	3595	281	4028	330	4953	118	4251	600	4988	1234	3671	1734	2910	854	1255	741	6587	1212	1810
18	721	3555	288	4133	555	3636	275	4023	341	5080	117	4060	547	4975	1043	3625	1421	4041	493	946	647	7852	855	2305
19	1333	2747	279	4143	514	3864	269	4000	374	5242	173	3993	509	4991	969	3685	1234	4509	272	1340	609	6876	573	3294
20	2478	1328	256	4050	472	4000	255	4000	371	4640	473	4105	463	5064	807	3573	1076	4503	297	2252	1074	5217	541	3533
21	1733	1514	259	4134	463	4079	246	4022	341	4381	610	4310	438	5000	2445	1625	906	4377	331	2754	2075	2973	2183	1191
22	1103	2479	231	4188	436	4147	257	4115	335	4431	664	4576	429	4988	11456	555	777	4263	437	2524	2298	5642	3050	972
23	854	3319	231	4107	428	4194	255	4280	331	4500	670	4788	567	4024	7046	637	690	4175	732	1822	3330	5533	1860	805
24	751	3600	223	4069	400	4300	188	4328	333	4508	664	4887	703	3352	2801	1741	584	4198	653	1749	3410	3322	1060	1264
25	686	3600	219	4004	382	4350	159	4526	327	4503	622	4653	677	2744	1855	2947	500	4149	463	2187	3170	3976	911	1681
26	717	3271	219	3938	356	4341	203	4551	325	4550	584	4362	458	4008	1511	3599	451	4113	409	3197	2860	4113	666	2005
27	1214	2743	220	3827	365	4246	252	4613	319	4634	567	4624	363	4350	1234	3704	410	4113	403	4437	2534	3624	567	2295
28	1951	1308	210	3995	344	4146	266	4605	279	4669	887	3906	326	4486	1028	3600	372	4154	408	4887	2173	2830	742	2381
29	2730	1207	245	4197	329	4130	295	4720			1130	3041	303	4687	880	3679	341	4200	375	4375	1824	2464	596	3478
30	3050	1184	322	4225	334	4230	299	4649			71	3645	313	4428	764	3700	304	4200	337	4287	1510	2580	558	4001
31	2760	1386			338	4317	280	4223			743	4350			629	3747			294	4456	1264	3154		
Avg.	917	2131	545	2590	424	3679	274	4222	301	4482	398	4245	830	3848	2951	1967	1064	3220	508	2036	1094	3905	1766	1222

DAILY FLOW AND CONTINUOUS RECORDED QUALITY DATA

PHS Station No.: 236
Location: Salt Fork of Arkansas River at Tonkawa, Oklahoma
Water Year: 1962

Basin: Arkansas River
Tributary to: Arkansas River
Remarks: Record very good. Occasional minor stratification.

Equations Used to Compute Constituents--
Chlorides: Log Cl =1.1425 Log Sp.C.-1.0569
Sulfates: SO4=0.0853 Sp. C.
Dissolved Solids: DS =0.5997 Sp. C.

Discharge (cfs) and Specific Conductance, Micrombos/cm (umhos)

Day	October		November		December		January		February		March		April		May		June		July		August		September	
	cfs	umhos	cfs	umhos	cfs	umhos	cfs	umhos	cfs	umhos	cfs	umhos	cfs	umhos	cfs	umhos	cfs	umhos	cfs	umhos	cfs	umhos	cfs	umhos
1	603	4249	1886	1117	506	3900	467	3903	1493	4600	316	3761	286	3782	571	4105	87	5213	234	4352	1338	3076	42	5000
2	645	4093	17320	281	498	3944	451	3850	1336	4761	403	3777	308	4028	499	4478	91	5199	216	4530	2048	2524	43	4988
3	576	3762	20758	308	480	3906	445	3908	1243	4794	345	3800	322	4287	464	5613	97	4446	202	4739	1693	2876	52	4938
4	506	4132	8032	519	460	3833	441	4000	1163	4737	463	3756	277	4329	427	5402	771	7416	186	4700	1304	3585	49	4973
5	450	4323	4013	1029	479	3926	444	3765	1049	4773	371	3650	276	4225	373	5099	2066	6758	171	4628	1080	4650	45	4987
6	394	4394	2388	1929	441	3901	403	3574	950	4687	373	3837	279	4253	316	4800	2380	5540	150	4607	919	5000	47	4809
7	356	4384	1565	3009	417	3838	533	3497	864	4496	374	3901	295	4207	283	4890	2494	4951	123	4615	770	5000	62	4258
8	311	4281	1329	3645	423	3750	641	3508	829	4206	351	3800	310	4180	246	5016	2441	4375	100	4538	651	5050	80	4012
9	340	3682	1176	3736	798	2650	404	3539	795	3736	352	3760	331	4279	220	5062	2470	3760	160	3595	512	5000	66	4235
10	2046	272	1058	3654	1058	1915	405	3812	763	3600	375	3782	335	4320	204	5043	2511	3674	362	2585	412	5123	51	4239
11	5161	629	983	3780	740	2310	404	3787	722	3600	350	3800	320	4275	181	5114	2590	3597	202	2486	353	5088	48	4300
12	3746	808	876	3684	513	2700	428	3740	682	3611	384	3800	308	4206	165	5176	2170	3906	126	2876	306	5050	44	4424
13	2215	1089	795	3672	410	3200	439	3824	636	3751	500	3915	315	4231	149	5041	1883	4272	106	3961	249	5038	42	4575
14	1250	1957	723	3821	369	3350	441	3868	634	3817	396	3750	318	4300	138	5111	1695	4736	98	4480	200	4649	41	4775
15	809	2597	872	3438	448	3500	446	3782	623	3697	334	3854	307	4300	124	5200	1521	5049	100	4404	167	4536	42	4874
16	590	3124	1998	1898	833	2982	431	3657	629	3605	303	3817	301	4447	114	5145	1300	5000	97	4515	141	4600	59	4616
17	481	3546	1752	1987	1821	1656	419	3700	613	3600	291	3842	266	4596	99	5202	1080	4917	94	4550	130	4834	91	4907
18	421	3707	1485	2361	1485	2060	398	3732	554	3600	273	3850	267	4617	91	5090	924	4812	86	4020	120	5000	111	4553
19	371	4013	1065	2314	1272	1863	363	3788	566	3629	263	3843	264	4650	82	5226	799	4579	69	4200	110	4988	130	5754
20	328	4142	853	3155	889	1987	344	3809	577	3676	293	3862	293	4599	79	5050	676	4335	66	4374	100	5060	940	1375
21	295	4169	795	3716	745	2829	349	3881	483	3673	287	3900	268	4393	78	4951	563	4468	65	4736	90	5139	3237	683
22	269	4138	748	3949	683	3352	350	4283	453	3637	313	3900	240	4485	71	4996	481	4337	65	4925	80	5285	837	1324
23	237	4143	720	4000	614	3933	351	4907	484	3725	306	3889	232	4650	84	5288	486	3857	65	4900	70	5250	497	3665
24	221	4339	695	4014	599	5111	361	5755	441	3717	265	3780	212	4800	101	5657	672	3071	648	2000	62	5213	541	5476
25	204	4388	667	4015	589	5292	378	5706	422	3650	294	3657	197	4800	102	5941	557	3268	1838	850	57	5027	613	5776
26	190	4288	623	3995	571	4493	383	5191	405	3671	339	3623	193	4800	72	5891	411	3928	1076	1000	54	4913	667	5971
27	186	4340	594	4047	554	4147	428	3519	313	3773	435	3420	199	4756	69	5600	362	4025	964	1500	52	4887	638	6045
28	185	4360	559	4009	533	4050	1516	2600	285	3750	411	3441	466	2857	81	5258	315	4021	711	3500	50	5024	588	6176
29	179	4316	521	3931	529	4025	2351	2165			379	3612	799	2478	76	5045	282	4395	490	4400	47	5207	490	5956
30	220	4249	514	3904	518	3960	1840	3675			370	4347	660	3302	69	5251	259	4551	385	5300	44	5075	440	5440
31	942	1838			494	3950	1683	4694			311	3947			65	5055			437	5700	43	5023		
Avg.	958	1729	2579	1306	670	3114	604	3670	715	4108	355	3790	315	4062	184	5026	1148	4567	313	2824	427	3983	354	3305

DAILY FLOW AND CONTINUOUS RECORDED QUALITY DATA

PHS Station No.: 235
Location: Salt Fork, Arkansas River near Jet, Okla.
Water Year: 1961

Basin: Arkansas River
Tributary to: Arkansas River
Remarks: Records good. Frequent minor stratification.

Equations Used to Compute Constituents--
Chlorides: Log Cl =1.2132 Log Sp.C.-1.3185
Sulfates: SO_4=0.0183 Sp. C. + 343
Dissolved Solids: DS =0.5927 Sp. C.

Discharge (cfs) and Specific Conductance, Microohos/cm (µmhos)

Day	October		November		December		January		February		March		April		May		June		July		August		September	
	cfs	µmhos	cfs	µmhos	cfs	µmhos	cfs	µmhos	cfs	µmhos	cfs	µmhos	cfs	µmhos	cfs	µmhos	cfs	µmhos	cfs	µmhos	cfs	µmhos	cfs	µmhos
1	166	5650	571	4950	134	5452	230	5012	119	5558	232	5160	733	5588	187	5659	250	4298	127	4756	117	5789	673	3671
2	121	5500	532	4500	162	5500	227	5000	134	5600	207	5043	774	5539	216	5755	242	4337	101	4754	78	6625	553	3850
3	113	5550	460	4687	155	5392	219	4907	145	5540	213	4990	742	4954	150	6456	571	4267	91	4704	64	6831	402	4095
4	101	5600	449	4670	171	5245	224	4499	153	5515	210	4853	657	5184	218	6286	715	4500	83	4821	55	6743	374	4100
5	98	5700	398	4500	149	5065	211	4679	162	5475	189	5003	577	5171	878	5689	729	4700	78	5125	42	6932	322	4125
6	76	5800	335	4500	133	5077	202	4520	167	5287	195	4992	545	5147	2183	5153	792	5000	50	5238	32	7129	292	4093
7	64	5900	295	4684	143	5176	186	4560	177	5265	292	4930	440	5270	2852	4789	880	4260	35	5701	17	7321	260	4181
8	58	6000	278	4749	128	5272	191	4749	185	5097	219	4696	418	5678	3088	3813	919	3491	33	5664	19	7600	238	4344
9	40	6200	253	4653	138	5300	195	4800	193	5012	128	5004	577	5663	2870	3888	883	3400	27	5791	19	7800	238	4395
10	39	6400	227	5000	233	5300	196	4825	202	4890	120	5015	508	5826	2491	4036	795	3400	25	5838	17	8000	252	4362
11	66	6000	215	5000	352	5300	189	4800	213	4749	107	4983	584	5859	2092	3734	689	3675	21	6654	12	8200	236	4350
12	276	5822	210	4988	375	5273	189	4740	219	4657	163	4847	558	5858	1726	3461	597	4400	15	7679	48	8400	275	4359
13	247	6133	217	4912	381	5200	188	4780	225	4650	161	4841	476	5898	1429	3661	429	4596	56	8066	91	9000	350	4432
14	311	5725	207	4929	375	4783	202	4785	225	5557	119	5068	492	5722	1332	3739	647	4682	14	8312	167	25256	478	4536
15	405	5500	227	5000	373	4518	206	4795	239	5853	93	4978	467	5637	949	3933	970	4727	26	7333	376	13038	429	4587
16	461	5500	186	4879	350	4874	197	4843	255	6106	68	5088	383	5612	709	3990	1127	4800	53	6789	449	9254	378	4748
17	440	5500	182	4858	322	4937	201	4900	301	5000	166	4886	347	5488	662	4000	1112	4776	61	6359	460	8100	333	4763
18	518	5500	168	4862	313	5075	193	4900	295	4835	610	4862	309	85	588	4057	968	4594	80	6176	460	7304	289	4750
19	631	5338	167	4900	310	5119	202	5025	245	5096	484	4815	328	5562	506	4088	820	4249	59	6282	677	6988	254	4763
20	628	5217	144	4937	312	5078	189	5067	245	5112	557	5016	321	5567	436	4077	678	4356	47	6804	1536	6554	251	4800
21	574	5287	145	5002	269	5200	166	5035	250	5207	574	5362	252	5411	839	3933	588	4600	107	6511	3069	5845	259	4787
22	526	5302	125	5046	256	5200	147	5013	266	5188	577	5293	255	5369	1255	3900	484	4600	116	6417	3698	2901	245	4821
23	475	5226	131	5100	248	5133	145	5069	267	5200	535	4701	306	5243	1081	3954	390	4600	162	6137	3461	3982	196	4975
24	428	5202	129	5075	234	4872	109	5320	270	5200	470	5194	290	5003	951	4262	348	4558	225	6000	3090	4639	193	5039
25	438	5202	127	5000	271	4835	291	5200	269	5126	454	5076	223	5304	804	4151	287	4600	299	5116	2665	3802	248	5089
26	472	5133	140	5000	234	4937	219	5271	212	4971	511	4998	195	5600	652	40121	259	4600	317	4255	2208	2754	367	5073
27	481	5100	168	5001	214	5093	166	5412	200	5005	556	5055	199	5719	575	4038	247	4739	278	4766	1835	2600	432	5058
28	541	5100	264	4933	238	5300	158	5487	218	5182	672	6311	170	5762	502	40121	191	4899	248	4683	1678	3800	460	5075
29	556	5100	160	4955	251	5300	125	5500			659	5700	195	5788	405	40621	200	4863	217	4467	1205	1300	513	4932
30	659	5100	119	5261	249	5234	108	5543			447	5725	219	5676	350	41731	161	4784	172	5139	994	3600	526	4465
31	591	5100			230	5050	108	5500			625	5608			310	42001			135	5550	798	3705		
AVG.	341	5337	240	4820	246	5095	186	4945	216	5194	323	5174	417	5508	1075	4142	601	4373	108	5333	943	4543	350	4536

DAILY FLOW AND CONTINUOUS RECORDED QUALITY DATA

PRS Station No.: 235
Location: Salt Fork, Arkansas River near Jet, Okla.
Water Year: 1962

Basin: Arkansas River
Tributary to: Arkansas River
Remarks: Records good. Frequent minor stratification.

Equations Used to Compute Constituents--
Chlorides: Log Cl =1.2132 Log Sp.C.-1.3185
Sulfates: SO_4=0.0183 Sp. C. + 343
Dissolved Solids: DS =0.5927 Sp. C.

Discharge (cfs) and Specific Conductance, Micromhos/cm (µmhos)

Day	October		November		December		January		February		March		April		May		June		July		August		September	
	cfs	µmhos	cfs	µmhos	cfs	µmhos	cfs	µmhos	cfs	µmhos	cfs	µmhos	cfs	µmhos	cfs	µmhos	cfs	µmhos	cfs	µmhos	cfs	µmhos	cfs	µmhos
1	461	4787	440	4592	287	4420	298	4582	699	6169	177	4387	187	5000	348	6266	52	11580	173	4702	756	5905	8	9646
2	443	4900	919	3960	281	4520	301	4511	668	6019	169	4400	128	5073	326	5575	801	8639	168	4756	779	6017	8	9575
3	387	4947	1038	4637	326	4531	297	4136	627	5839	182	4410	129	5173	266	5696	1923	6711	141	4715	820	5944	8	9699
4	341	4844	1017	4369	284	4371	279	4099	568	5355	200	4400	126	5173	225	5713	2246	5632	97	5003	782	4599	9	10514
5	307	4668	921	4526	280	4393	384	4222	495	5201	205	4326	153	5088	207	5940	2342	5218	63	5125	682	4313	9	10747
6	247	4457	831	4803	259	4443	351	4291	495	4217	180	4419	185	5188	179	6149	2124	4637	60	5227	598	4977	9	10110
7	199	4800	718	4646	231	4492	326	4260	449	3979	183	4471	204	5200	164	6375	1876	4715	75	5235	463	5252	8	9446
8	189	4923	639	4683	244	4588	314	4152	425	4064	231	4374	206	5038	140	6264	1646	4774	52	5327	387	5566	8	9503
9	233	4963	589	4670	331	4507	382	4365	408	4126	197	4600	170	5074	126	6460	1509	5137	63	5362	348	5627	8	10988
10	552	4780	504	4441	309	4410	367	4539	380	4235	230	4400	162	5177	121	6500	1537	5113	76	5295	306	5209	8	10185
11	459	5101	457	4717	300	4607	310	4590	368	4215	370	4333	190	5321	88	6669	1554	4612	78	5263	208	4708	7	10688
12	435	5509	409	4791	308	4943	298	4665	367	4169	234	4513	199	5462	76	6686	1445	5130	89	5420	152	5039	11	11213
13	331	5024	371	4987	274	4937	265	4747	357	4200	173	4463	176	5587	57	6699	1258	5153	105	5679	115	5338	9	10122
14	293	5186	350	4932	252	4903	243	4800	301	4229	155	4491	167	5617	39	7083	1062	5147	69	5530	90	5642	43	7607
15	257	5163	431	4879	253	4921	233	4913	336	4219	160	4523	141	5761	26	7435	842	5185	25	5738	75	5704	124	5871
16	232	5212	496	4816	261	4986	241	5032	298	4240	128	4450	155	5800	15	7793	714	4845	20	6085	53	5911	149	6127
17	219	5176	446	4843	284	5000	236	5317	315	4210	131	4507	150	5800	17	8119	619	4395	46	6001	41	6127	131	7707
18	180	5106	456	4969	300	5000	234	5902	346	4088	175	4490	153	5851	23	8007	536	4395	41	5921	51	6311	166	8392
19	172	5229	481	4973	309	5082	228	7484	245	4196	163	4400	154	5800	20	7709	441	4353	48	5732	32	6452	183	7355
20	144	5389	466	5000	314	5347	210	8948	197	4316	234	4347	134	5822	28	7800	379	4200	53	5730	16	6696	228	7211
21	123	5342	460	5000	316	7063	191	8691	259	4280	151	4401	131	5806	77	6943	317	4380	49	5775	11	7370	344	7054
22	137	5369	457	5036	363	7178	185	8185	225	4288	123	4598	97	5896	95	7469	332	4414	48	5943	9	7957	448	6975
23	106	5377	419	4915	362	5452	182	7856	228	4363	103	4600	92	5972	30	8584	336	4375	24	6555	8	8000	506	6732
24	109	5426	397	4982	344	4787	186	7468	223	4387	120	4563	100	6000	26	9188	295	4326	311	6036	6	8220	588	6421
25	101	5523	380	4764	342	4746	196	7476	218	4387	241	4389	107	6014	39	8814	262	4345	527	6009	5	8596	559	6398
26	97	5523	350	4599	335	4702	236	7927	200	4314	217	4464	102	5949	12	8872	239	4979	423	6618	5	8663	520	6135
27	98	5395	313	4720	349	4487	315	9459	184	4269	230	5311	214	5478	6	9304	219	4980	386	6597	5	9593	472	5707
28	122	5437	319	4702	340	4548	336	10856	179	4428	222	4510	381	5136	8	10339	203	4800	367	6606	5	10389	389	5887
29	82	5567	316	4686	315	4559	457	11651			163	4752	400	5403	40	8661	182	4825	414	6321	6	10595	340	6175
30	123	5558	314	4677	297	4581	620	7877			155	5024	352	7040	9	8976	184	4754	470	6117	6	10388	306	6006
31	236	5533			294	4509	685	6694			202	4298			5	10030			590	6000	12	10468		
Avg.	239	5069	523	4690	301	4896	303	6481	359	4682	187	4487	175	5550	92	6418	916	5176	166	5944	220	5398	187	6583

DAILY FLOW AND CONTINUOUS RECORDED QUALITY DATA

PRS Station No.: 232
Location: Medicine Lodge River near Kiowa, Kansas
Water Year: 1961

Basin: Arkansas River
Tributary to: Salt Fork of the Arkansas River
Remarks: Records good. Occasional minor stratification.

Equations Used to Compute Constituents--
Chlorides: Cl =0.0700 Sp. C.
Sulfates: SO_4=0.2071 Sp. C.
Dissolved Solids: DS =0.7367 Sp. C.

Discharge (cfs) and Specific Conductance, Micromhos/cm (µmhos)

Day	October		November		December		January		February		March		April		May		June		July		August		September	
	cfs	µmhos	cfs	µmhos	cfs	µmhos	cfs	µmhos	cfs	µmhos	cfs	µmhos	cfs	µmhos	cfs	µmhos	cfs	µmhos	cfs	µmhos	cfs	µmhos	cfs	µmhos
1	22	1166	101	856	72	900	87	900	139	741	95	963	127	1000	83	920	37	1062	13	1230	29	1023	96	965
2	22	1162	97	905	75	900	81	900	134	702	97	960	110	1077	79	950	34	1050	11	1235	28	1123	89	970
3	22	1160	87	935	75	900	82	900	96	797	95	963	102	1010	81	960	38	1035	11	1224	29	1117	81	970
4	22	1078	84	926	76	900	84	900	86	872	95	968	95	1053	236	662	152	539	10	1304	35	1175	80	970
5	20	1105	80	925	76	900	86	893	59	927	93	960	93	1045	662	623	105	773	9	1345	37	1143	80	970
6	20	1132	78	908	73	888	86	885	61	944	93	960	90	1023	293	1043	131	836	7	1363	39	1053	78	970
7	18	1167	77	898	72	885	86	895	97	920	95	933	90	1028	160	1072	227	734	7	1327	38	1088	81	975
8	18	1158	79	892	73	904	85	878	135	838	93	938	100	987	114	1053	191	757	7	1310	35	1090	88	1000
9	19	1152	78	889	72	900	85	882	131	779	88	940	155	928	89	1053	105	766	8	1338	34	1139	78	1008
10	19	1160	77	918	89	891	86	895	104	780	86	938	187	1009	79	1100	73	815	7	1350	31	1150	79	1000
11	26	932	80	924	126	827	88	898	99	847	87	928	162	1142	69	1100	55	887	7	1351	28	1200	86	968
12	29	896	82	905	115	784	88	878	106	873	90	920	134	1148	63	1095	46	937	7	1350	26	1180	91	824
13	263	520	82	900	96	910	88	890	118	890	89	920	121	1102	59	1079	41	950	7	1350	38	1150	96	835
14	835	636	78	900	98	920	90	895	122	959	83	923	121	1095	56	1081	209	475	23	1150	41	1020	92	852
15	283	611	75	919	92	920	90	895	114	958	80	915	109	1080	51	1113	164	896	136	750	214	600	82	897
16	232	696	73	923	92	920	88	900	109	963	87	866	109	1075	48	1136	70	1151	55	950	117	441	75	947
17	600	658	73	920	92	920	88	900	106	935	170	801	107	1045	48	1065	50	1113	31	1050	83	523	72	950
18	231	681	80	868	95	908	89	892	161	873	288	881	101	1038	46	1141	43	1093	22	1080	75	700	68	955
19	184	563	81	850	92	919	88	880	116	897	249	1039	101	1028	44	1187	41	1065	14	1099	2502	450	65	978
20	155	706	76	858	96	924	86	892	106	900	181	1080	99	1013	45	1219	38	1047	18	1035	3698	510	69	964
21	146	851	75	865	88	935	63	960	105	917	165	1078	95	1008	63	977	34	1048	169	466	1035	550	67	915
22	122	870	74	919	72	962	67	989	106	922	156	1067	91	960	106	912	32	1052	124	712	511	650	66	875
23	107	853	70	931	86	967	79	889	106	935	143	1110	92	867	109	980	28	1075	401	715	345	734	62	943
24	98	827	71	921	104	931	80	915	99	930	132	1172	86	883	84	1050	26	1095	448	692	268	787	526	646
25	98	893	71	921	109	838	60	1075	97	930	123	1255	81	944	70	1000	26	1100	183	689	219	830	248	581
26	97	841	71	925	96	850	58	1135	95	950	118	1295	81	1008	58	1000	28	1100	110	648	185	858	97	845
27	86	922	73	910	96	900	60	1160	96	963	109	1200	75	983	51	1000	27	1121	83	757	159	886	77	1042
28	83	903	78	917	93	900	63	1094	91	966	103	1080	81	952	48	1000	25	1125	65	822	138	931	71	963
29	80	900	75	892	93	900	71	999			93	1058	82	966	46	1000	22	1135	52	864	123	948	67	924
30	81	889	75	902	89	900	85	923			91	1017	84	949	43	1023	17	1174	43	906	114	973	64	961
31	95	847			89	900	115	826			127	936			39	1046			34	968	105	982		
Avg.	129	683	78	900	90	897	82	920	106	886	119	1011	104	1020	103	900	71	838	68	660	328	831	99	859

769-502 O-69-9

DAILY FLOW AND CONTINUOUS RECORDED QUALITY DATA

PMS Station No.: 232
Location: Medicine Lodge River near Kiowa, Kansas
Water Year: 1968

Basin: Arkansas River
Tributary to: Salt Fork of the Arkansas River
Remarks: Records good, Occasional minor stratification.

Equations Used to Compute Constituents--
Chlorides: Cl =0.0794 Sp. C.
Sulfates: SO_4=0.2971 Sp. C.
Dissolved Solids: DS =0.7347 Sp. C.

Discharge (cfs) and Specific Conductance, Micromhos/cm (μmhos)

Day	October		November		December		January		February		March		April		May		June		July		August		September	
	cfs	μmhos	cfs	μmhos	cfs	μmhos	cfs	μmhos	cfs	μmhos	cfs	μmhos	cfs	μmhos	cfs	μmhos	cfs	μmhos	cfs	μmhos	cfs	μmhos	cfs	μmhos
1	59	970	356	721	94	890	114	959	180	913	51	1146	80	961	67	966	1767	263	37	1050	293	349	122	623
2	58	961	353	701	94	870	109	917	160	981	60	1075	76	976	62	961	536	611	33	1126	141	690	182	571
3	58	966	194	672	94	926	107	955	146	1000	83	950	73	959	65	966	434	695	27	1200	79	926	171	560
4	56	1001	159	805	94	955	107	952	139	1000	121	834	73	945	60	935	442	555	23	1075	57	950	96	700
5	52	1039	136	871	92	967	103	926	125	1000	168	801	76	925	58	921	265	699	50	700	46	960	62	780
6	50	998	119	894	92	968	75	1057	115	987	104	970	81	919	56	919	159	776	197	600	38	1000	53	810
7	49	970	113	918	91	955	83	1042	111	1010	107	986	82	913	55	836	112	836	151	820	32	1020	49	884
8	48	973	109	938	101	918	80	961	113	984	103	979	82	945	52	868	98	869	92	783	28	1111	50	845
9	49	947	101	950	132	929	75	974	112	1013	103	1013	78	967	49	959	187	649	73	703	24	1450	77	697
10	52	924	97	960	124	1002	89	1113	108	1020	101	1000	75	953	65	952	291	811	56	818	20	1478	74	702
11	54	938	96	953	94	1147	82	1253	106	1019	101	983	75	956	62	915	319	655	50	900	16	1494	58	767
12	54	941	94	950	81	1214	65	1258	106	1008	98	969	76	930	58	921	160	604	48	913	13	1457	45	852
13	52	960	93	947	67	1268	70	1153	103	1023	94	992	76	923	55	932	111	694	35	981	12	1446	39	897
14	50	968	101	960	78	1180	74	1061	104	968	91	980	76	923	54	998	90	835	29	1039	10	1431	34	898
15	51	962	113	909	83	1163	75	978	114	903	91	977	73	930	53	1000	77	923	25	1049	10	1306	32	895
16	49	952	141	895	93	1037	75	961	119	886	89	965	71	933	53	1032	66	883	20	1159	9	1329	31	915
17	49	967	170	993	103	967	70	939	117	1026	87	956	73	950	55	981	60	850	62	746	7	1385	33	909
18	49	965	167	1008	124	903	60	931	108	936	85	950	70	950	55	994	61	953	71	858	6	1381	32	881
19	47	958	142	961	112	944	53	988	102	940	83	950	67	960	54	1000	52	1000	56	933	3	1390	33	857
20	47	958	129	963	108	973	67	1069	98	953	83	950	67	960	53	1000	47	1013	35	1059	1	1418	36	833
21	48	939	115	950	111	961	50	1081	98	1000	83	890	65	970	52	999	44	1000	26	1050	0	0	54	735
22	50	918	108	967	130	860	58	1064	98	1000	87	950	67	1000	53	931	41	1010	20	1055	0	0	677	303
23	49	923	101	977	149	730	61	1050	99	1050	83	950	70	1000	50	980	48	966	17	1131	0	0	268	319
24	49	915	94	987	154	835	70	1015	97	1100	88	920	70	1000	77	1068	36	1035	11	1258	0	0	157	586
25	49	915	93	977	133	950	83	986	99	1101	109	900	70	1000	76	1070	38	1003	30	951	1	1618	143	699
26	48	934	92	962	98	960	111	835	85	1116	109	926	66	1000	70	1075	35	980	31	1026	18	1157	101	850
27	49	902	91	974	93	907	151	851	88	1116	100	961	90	1050	17	1080	30	1060	29	977	16	950	80	810
28	50	943	91	842	95	939	204	800	90	1163	93	985	89	1036	18	1121	81	900	27	778	9	1091	69	838
29	64	858	92	832	108	1023	332	729			87	960	89	1101	23	1050	52	1060	164	605	4	1157	61	830
30	99	783	92	832	104	1011	309	705			86	936	73	926	24	1069	62	1070	53	548	1	1183	59	800
31	132	762			108	993	250	809			82	981			221	295			61	593	0	0		
Avg.	56	929	132	879	103	936	107	906	109	970	91	964	75	980	60	817	193	523	53	797	29	783	100	626

DAILY FLOW AND CONTINUOUS RECORDED QUALITY DATA

PWS Station No.: 772
Location: Salt Fork of the Arkansas River near Ingersoll, Oklahoma
Water Year: 1962

Basin: Arkansas River
Tributary to: Arkansas River
Remarks: Records good. Occasional minor stratification.

Equations Used to Compute Constituents--
Chlorides: Cl =0.0866 Sp. C.
Sulfates: SO_4=0.4147 Sp. C.
Dissolved Solids: DS =0.7786 Sp. C.

Discharge (cfs) and Specific Conductance, Micromhos/cm (mhos)

Day	October		November		December		January		February		March		April		May		June		July		August		September	
	cfs	mhos	cfs	mhos	cfs	mhos	cfs	mhos	cfs	mhos	cfs	mhos	cfs	mhos	cfs	mhos	cfs	mhos	cfs	mhos	cfs	mhos	cfs	mhos
1	49	2197	229	1809	64	2278	83	2210	162	1638	64	2168	37	2357	78	2412	546	700	25	2068	275	805	1	1903
2	43	2203	206	1735	68	2298	90	2323	143	1726	67	2119	38	2320	65	2262	842	900	24	2160	458	1402	1	1892
3	39	2213	149	1853	68	2300	89	2193	129	1726	74	2133	37	2350	54	2300	663	1308	20	2175	314	1612	1	1815
4	36	2223	118	1991	70	2262	88	2120	119	1818	77	2336	38	2337	47	2300	366	1227	17	2107	263	855	1	1852
5	36	2200	97	1963	70	2234	149	1968	109	2049	83	2364	43	2269	42	2300	242	1000	16	2056	153	986	0	1901
6	33	2193	89	2022	70	2280	134	2073	102	2106	75	2179	53	2169	37	2276	236	987	16	2100	103	1252	0	1926
7	29	2195	83	2119	69	2260	115	2034	97	2163	69	2078	60	2019	34	2218	192	1019	14	2100	74	1446	1	1896
8	22	2168	78	2183	74	2101	101	1963	96	2125	66	2082	62	2137	30	2332	133	1383	15	2100	60	1643	1	1838
9	30	2100	75	2242	86	2003	90	2023	96	2188	68	2170	61	2115	26	2363	103	1102	40	1998	51	1718	1	1711
10	36	2100	72	2340	72	2038	80	2696	96	2263	65	2237	62	2166	23	2380	361	1323	33	1820	46	1780	1	1725
11	28	2100	73	2262	65	2192	73	2652	93	2270	62	2260	61	2186	20	2363	358	1515	22	1737	36	1812	26	2142
12	22	2113	71	2310	60	2395	80	2532	89	2215	63	2203	55	2274	16	2382	228	1135	16	1927	30	1852	27	1975
13	26	2115	69	2293	55	2630	89	2331	86	2196	62	2262	56	2300	12	2313	120	1160	11	2006	27	1906	12	1779
14	23	2128	69	2300	52	2329	96	2125	81	2178	57	2231	57	2300	9	2389	74	1387	8	2060	22	1907	8	1728
15	23	2103	83	2100	53	2300	93	2100	80	2205	54	2220	50	2300	8	2332	60	1584	7	2100	16	1889	12	1602
16	23	2100	116	1928	57	2264	93	2169	80	2200	54	2275	46	2257	9	2274	51	1774	7	2027	13	1878	7	1752
17	22	2082	153	2131	63	2096	93	2217	82	2260	54	2313	43	2162	12	2225	48	1845	9	1705	10	1902	324	666
18	20	2050	123	2149	66	2050	81	2227	76	2055	54	2299	40	2157	13	2200	46	1860	10	1854	7	1960	784	592
19	20	2148	108	2008	66	2198	70	2325	71	2020	51	2291	39	2220	12	2200	46	1810	9	1928	6	1995	319	557
20	20	2200	97	1997	67	2272	62	2469	68	2088	51	2284	36	2208	12	2091	44	1913	7	1913	5	1959	825	622
21	19	2193	92	2083	73	2164	66	2497	65	2196	50	2332	33	2001	16	2025	43	2008	6	1925	4	1960	1207	581
22	19	2120	87	2100	74	2007	71	2469	64	2216	50	2311	33	2104	10	2233	46	1883	5	2020	4	1960	744	620
23	18	2102	81	2112	76	2000	81	2385	66	2232	45	2286	32	2206	8	2223	69	1761	5	2100	3	1888	701	635
24	18	2153	75	2172	72	1990	99	2236	63	2096	49	2193	28	2378	7	2216	117	1600	27	1850	3	1841	289	606
25	17	2118	73	2205	70	1960	115	2136	63	2093	52	2163	26	2354	4	2219	81	1955	235	1775	3	1913	201	939
26	17	2099	71	2253	76	2014	148	1978	60	2306	54	2252	28	2288	2	2295	48	2166	77	1300	3	1909	142	1358
27	18	2166	68	2330	76	2098	181	1633	60	2848	58	2300	25	1955	1	2271	38	2034	87	1300	3	1905	134	1529
28	19	2191	66	2360	75	2110	269	1559	62	2626	56	2351	27	2170	9	2106	83	1867	588	800	2	1948	115	1655
29	33	1952	64	2285	69	2100	259	1809			49	2276	25	2372	16	2147	68	1852	696	800	2	2005	100	1774
30	115	1284	63	2270	70	2100	216	1556			44	2230	29	2572	5	2203	31	1951	402	800	2	1925	90	1825
31	111	1220			73	2113	184	1523			40	2238			5	1964			447	800	3	1937		
Avg.	32	1962	97	2073	68	2160	114	2012	87	2085	59	2235	50	2223	21	2287	192	1252	93	979	66	1284	205	736

DAILY FLOW AND CONTINUOUS RECORDED QUALITY DATA

USGS Station No.: 764
Location: Salt Fork of the Arkansas River near Winchester, Oklahoma
Water Year: 1961

Basin: Arkansas River
Tributary to: Arkansas River
Remarks: Records poor. Occasional minor stratification.

Equations Used to Compute Constituents--
Chlorides: Log Cl =1.6665 Log Sp.C.-3.1266
Sulfates: SO_4=0.6076 Sp. C.
Dissolved Solids: DS =0.7706 Sp. C.

Discharge (cfs) and Specific Conductance, Micromhos/cm (mhos)

Day	October		November		December		January		February		March		April		May		June		July		August		September	
	cfs	mhos	cfs	mhos	cfs	mhos	cfs	mhos	cfs	mhos	cfs	mhos	cfs	mhos	cfs	mhos	cfs	mhos	cfs	mhos	cfs	mhos	cfs	mhos
1	2	2633	32	2000	24	2270	32	2200	48	2096	47	2350	130	2119	32	2619	8	2650	3	2500	0	3160	27	2650
2	2	2281	32	2059	24	2239	24	2200	71	1669	48	2380	102	2003	28	2623	8	2500	3	2500	1	2619	26	2720
3	2	2060	28	2101	24	2226	24	2167	53	1635	50	2336	86	2100	28	2350	17	2300	3	2500	1	2407	22	2750
4	2	2160	24	2188	23	2036	23	2200	33	1845	47	2303	70	2080	1421	1600	608	1720	2	2500	0	2633	20	2800
5	2	2318	32	2172	26	1899	27	2230	60	1867	43	2285	60	2068	797	1706	316	1700	1	2500	0	1803	19	2850
6	1	2364	32	2163	26	1977	28	2100	32	1902	43	2287	56	2268	298	1617	149	1700	1	2500	0	2100	18	2850
7	1	2335	31	2183	23	2082	24	1900	26	1974	44	2304	50	2345	176	1760	163	1829	1	2500	0	-	19	2900
8	1	2290	30	2200	26	2187	23	1930	32	2026	37	2317	74	2185	119	1953	165	1615	1	2500	0	-	44	1700
9	1	2225	30	2225	26	2289	22	2100	36	2102	32	2330	185	2058	77	2120	81	1673	1	2500	0	-	46	1650
10	1	2219	30	2250	24	1850	24	2200	82	1840	32	2338	120	1927	58	2200	56	1954	1	2500	0	-	26	1800
11	87	1967	30	2273	63	1525	29	2115	101	1600	35	2382	138	1965	65	2300	38	2148	1	2500	0	-	20	2600
12	36	2000	28	2221	66	1600	28	2000	108	1550	60	2300	126	2107	35	2350	26	2270	1	2550	0	-	23	2500
13	224	1900	28	2206	63	1700	26	2050	103	1800	37	2265	110	2216	30	2650	20	2332	1	2550	2154	1300	31	2200
14	87	1900	28	2173	54	1817	28	2165	85	1950	32	2287	95	2279	28	2550	20a	1812	1	2550	621	1250	25	2600
15	111	2000	28	2206	57	2000	26	2137	86	1925	30	2305	77	2337	28	2650	143	1866	1	2550	139	920	19	2500
16	71	1950	26	2253	67	1935	25	2078	90	2001	134	1719	67	2385	26	2575	68	1522	1	2550	60	1185	15	2600
17	167	1825	25	2230	64	1976	24	2139	66	2050	781	1250	61	2417	34	2663	40	2062	0	2550	43	1733	13	2700
18	150	1800	25	2273	69	1953	25	2102	56	2075	.45	1500	60	2479	25	2504	31	2300	1	2550	233	1385	10	2800
19	110	1950	24	2300	66	1963	22	2255	56	2075	101	1750	60	2603	22	2550	26	2600	1	2516	11263	920	10	2800
20	82	1975	22	2293	61	2015	17	2222	66	2075	144	1900	57	2546	28	2550	21	2600	1	2382	191	1328	12	2700
21	63	1914	22	2265	56	2099	10	2440	69	2050	131	2030	51	2488	71	2357	18	2600	0	1519	75	1884	12	2600
22	46	1925	21	2318	48	2157	10	2614	73	2085	119	2080	46	2473	70	2313	16	2600	1	1499	303	1527	8	2600
23	36	1933	21	2299	42	2212	15	2636	69	2087	101	2130	65	2535	61	2623	14	2600	37	1510	75	1620	8	2700
24	35	1988	20	2266	40	2118	13	2619	60	2086	86	2128	61	2552	51	2333	12	2600	119	886	38	2100	817	1500
25	33	1825	20	2293	44	2127	17	2559	54	2103	80	2167	36	2586	44	2326	10	2600	41	763	30	2300	282	1350
26	33	1939	23	2057	38	2101	20	2654	47	2229	77	2030	33	2604	34	2607	8	2600	13	529	29	2500	123	1600
27	35	1900	23	1935	34	2115	21	2693	42	2308	75	1976	36	2576	28	2500	8	2600	2	1172	25	2550	77	1800
28	31	1914	26	2038	32	2089	25	2550	63	2320	71	2197	36	2550	20	2600	5	2600	0	1383	23	2650	63	2100
29	32	1965	24	2073	32	2150	45	2509			68	2258	36	2505	14	2700	4	2550	0	1651	23	2750	30	2300
30	33	1888	25	2072	31	2200	44	2676			70	2225	35	2558	10	2675	3	2500	0	1515	21	2768	20	2500
31	32	2000			33	2200	47	2568			102	2043			8	2650			0	1790	22	2625		
Avg.	45	1959	28	2178	38	2007	36	2259	59	1966	103	1829	74	2227	120	1762	77	1840	9	1151	506	1039	63	1791

DAILY FLOW AND CONTINUOUS RECORDED QUALITY DATA

PHS Station No.: 229
Location: Walnut River at Winfield, Kansas
Water Year: 1961

Basin: Arkansas River
Tributary to: Arkansas River
Remarks: Records good.
Stratification nil.

Equations Used to Compute Constituents--
Chlorides: Cl =1.3150 Log Sp.C.-1.7410
Sulfates: SO_4=0.1240 Sp. C.
Dissolved Solids: DS =0.4175 Sp. C.

Discharge (cfs) and Specific Conductance, Micromhos/cm (µmhos)

Day	October cfs	October µmhos	November cfs	November µmhos	December cfs	December µmhos	January cfs	January µmhos	February cfs	February µmhos	March cfs	March µmhos
1	123	677	2316	287	153	1620	186	1322	137	1750	230	850
2	112	550	908	391	157	1623	185	1360	137	1743	211	912
3	109	592	303	460	157	1660	181	1382	161	1740	199	972
4	101	621	256	490	194	1603	172	1400	138	1730	194	1045
5	97	666	311	692	169	1642	171	1677	136	1713	192	1110
6	163	755	270	520	160	1640	173	1535	140	1746	187	1190
7	120	662	240	581	162	1680	171	1565	163	1790	180	1260
8	92	979	222	647	186	1703	171	1575	163	1756	176	1305
9	90	1016	219	719	176	1712	166	1580	163	1713	170	1350
10	89	1063	206	779	209	1515	168	1580	163	1730	166	1403
11	81	1078	196	802	371	1528	164	1603	164	1763	153	1410
12	77	1122	184	867	2712	1468	161	1620	130	1760	162	1610
13	103	938	183	927	1850	797	160	1625	171	1773	186	1299
14	163	1141	187	993	673	602	160	1640	212	1800	203	1627
15	292	1287	196	1090	627	553	160	1643	216	1800	250	1505
16	265	1469	196	1202	326	552	160	1653	201	1800	212	1561
17	220	1557	186	1232	340	570	157	1670	197	1070	196	1532
18	215	1641	179	1283	254	600	157	1693	910	1266	228	1492
19	184	1740	171	1352	305	652	157	1703	4007	1052	448	1394
20	164	1093	184	1295	275	753	157	1703	1593	581	1163	1420
21	193	888	189	1422	248	803	156	1713	616	527	1037	1315
22	199	992	157	1469	231	819	166	1720	620	570	2529	976
23	150	979	156	1560	202	874	135	1713	362	610	1627	632
24	131	1006	151	1560	209	932	136	1713	316	652	1019	580
25	162	1009	153	1565	206	997	132	1713	287	670	653	592
26	2393	802	151	1585	202	1065	87	1717	264	732	529	615
27	2213	635	157	1516	201	1083	138	1720	265	772	6068	665
28	893	702	178	1570	201	1122	160	1720	260	810	11294	280
29	609	527	180	1619	198	1159	160	1720			5060	264
30	3559	663	175	1672	197	1213	160	1733			1690	406
31	6777	279			193	1277	160	1733			1526	500
Avg.	665	614	307	750	377	1101	155	1617	627	1075	1393	542

Day	April cfs	April µmhos	May cfs	May µmhos	June cfs	June µmhos	July cfs	July µmhos	August cfs	August µmhos	September cfs	September µmhos
1	1097	729	8878	286	686	1000	196	1300	382	1232	303	1117
2	1287	897	3690	595	640	1000	182	1295	333	1300	289	1137
3	934	1072	2129	571	699	1032	168	1288	307	1308	297	1119
4	708	1073	6280	626	1977	1030	158	1277	287	1310	2063	932
5	608	971	20631	232	2613	710	150	1263	276	1300	3961	777
6	528	973	51326	132	718	446	195	1225	256	1300	1366	966
7	460	993	61660	166	4056	363	1762	1127	238	1300	691	875
8	472	989	22608	232	3578	261	631	788	216	1308	522	719
9	1678	972	4902	592	998	481	253	692	201	1370	1107	805
10	6290	783	2652	626	921	717	180	776	186	1382	704	987
11	4820	344	1876	777	586	901	160	929	178	1600	311	1112
12	2590	336	1500	876	651	986	167	822	211	1600	429	838
13	2685	635	1294	946	401	957	165	878	2720	720	16560	272
14	1856	553	1083	979	2661	730	321	1025	6697	393	19296	236
15	1122	625	931	1005	2713	565	291	1113	1039	677	26856	216
16	862	602	816	1022	1601	763	351	1196	639	726	12030	332
17	893	672	766	1088	676	736	260	1290	465	812	2238	679
18	607	752	763	1131	673	687	192	1376	382	880	1635	881
19	556	861	1032	1167	603	706	179	1520	376	900	1123	1100
20	530	917	4013	950	365	822	1280	816	966	729	979	1162
21	511	990	3768	663	332	979	2719	679	1076	952	1259	1062
22	989	877	2360	658	310	1022	9373	433	6913	398	1014	1183
23	1521	1093	3632	749	291	1035	3929	171	10758	310	878	1265
24	937	820	7262	316	266	1056	9563	186	6970	301	1089	1226
25	772	793	3571	316	255	1075	11625	180	1119	422	4362	1022
26	594	890	1339	586	253	1095	2697	276	718	501	3171	630
27	501	912	1180	711	311	1109	1222	202	568	663	1506	627
28	650	923	957	777	239	1156	556	896	471	833	1112	657
29	627	997	763	861	221	1207	823	1006	410	900	977	687
30	6935	350	678	914	209	1290	556	1098	365	983	850	756
31			553	991			662	1165	336	1081		
Avg.	1464	634	6562	306	967	866	2227	738	1356	521	3366	901

DAILY FLOW AND CONTINUOUS RECORDED QUALITY DATA

PHS Station No.: 729
Location: Walnut River at Winfield, Kansas
Water Year: [illegible]

Basin: Arkansas River
Tributary to: Arkansas River
Remarks: Records good. Stratification nil

Equations Used to Compute Constituents:
Chlorides: Cl =1.7150 Log Sp.C.-1.741
Sulfates: SO_4=0.1260 Sp. C.
Dissolved Solids: DS =0.6171 Sp. C.

Discharge (cfs) and Specific Conductance, Micromhos/cm (µmhos)

Day	October		November		December		January		February		March		April		May		June		July		August		September	
	cfs	µmhos	cfs	µmhos	cfs	µmhos	cfs	µmhos	cfs	µmhos	cfs	µmhos	cfs	µmhos	cfs	µmhos	cfs	µmhos	cfs	µmhos	cfs	µmhos	cfs	µmhos
1	1304	856	4727	856	808	1001	611	1091	7016	238	524	1130	662	832	331	1268	366	1201	162	660	197	1136	68	1121
2	1160	766	10365	223	789	1069	583	1016	6303	276	583	1175	619	[illegible]	272	1603	613	1281	161	682	172	779	71	1401
3	776	822	22675	210	768	1091	573	1012	4776	230	558	1109	599	963	266	1507	4330	337	150	1000	171	717	132	1246
4	632	878	27366	226	753	1200	600	1030	3236	461	555	1206	591	993	220	1683	6330	325	118	683	152	862	420	1197
5	577	877	6682	360	729	1229	679	1050	2130	521	561	1212	389	1018	213	1113	3376	410	152	600	161	937	1517	1117
6	523	892	2538	601	696	1246	727	1091	1560	660	535	1266	381	1049	206	1000	817	410	6775	367	131	1031	363	958
7	678	950	1927	743	662	1235	687	1100	1173	756	608	1250	380	1098	201	1053	663	473	3580	606	126	1112	656	739
8	666	1216	1613	812	659	1212	642	1125	1082	765	609	1293	375	1100	196	1101	555	312	578	437	116	1155	481	767
9	628	1118	1613	882	725	1208	576	1125	936	825	691	1300	371	1163	192	1127	636	633	665	550	109	1192	683	726
10	1419	303	1298	968	722	1208	619	1062	886	892	656	1300	375	1173	183	1209	1467	786	1607	606	99	1200	733	793
11	23632	223	1238	993	768	1224	639	1066	837	931	687	1300	381	1173	180	1331	737	876	2300	360	93	1200	729	861
12	22752	215	1129	1000	672	1250	693	1157	801	956	620	1300	379	1196	173	1255	387	600	1227	613	86	1200	600	757
13	17653	237	1633	1086	567	1200	666	1120	765	1057	639	1300	377	1200	163	1265	471	598	603	510	81	1200	[illegible]	764
14	7124	461	6271	946	581	1197	505	1100	728	1093	629	1300	371	1200	158	1335	537	702	914	650	76	1200	[illegible]	835
15	5058	370	3067	524	569	1253	500	1113	1239	1053	608	1300	365	1200	153	1350	502	1001	2007	633	76	1222	1144	452
16	2667	566	2207	677	536	1336	521	1179	3250	876	593	1278	365	1219	155	1391	356	1265	11530	600	76	1277	6003	383
17	1530	763	11529	300	679	1332	512	1206	2460	648	595	1276	361	1251	155	1315	[illegible]	1015	642	604	70	1315	5115	[illegible]
18	1457	864	6231	330	1590	1173	505	1200	1633	636	581	1279	360	1261	153	1319	[illegible]	[illegible]	1530	620	67	1321	1050	[illegible]
19	1096	738	2526	638	1463	1087	633	1176	1063	765	592	1203	336	1261	138	1340	167	[illegible]	387	679	66	1320	537	[illegible]
20	568	933	1863	860	1251	939	628	1186	923	756	592	1300	367	1273	136	1303	151	620	261	555	63	1367	603	437
21	672	1048	1305	693	962	1026	667	1403	650	622	530	1330	360	1303	131	1413	153	[illegible]	236	508	63	1412	1720	[illegible]
22	868	1076	1461	820	876	1059	661	1303	672	867	1154	1276	361	1346	133	1457	186	613	207	616	63	1423	[illegible]	[illegible]
23	780	1115	1461	913	952	1098	622	1228	773	949	777	1175	349	1363	123	1458	165	842	213	1000	59	1464	3368	341
24	632	1150	1298	936	1062	1066	660	1275	743	1063	614	1070	331	1390	116	1456	186	591	169	726	63	1473	2453	291
25	913	1130	1001	922	936	1075	647	1275	743	1140	561	1467	316	1322	111	1462	185	663	211	693	58	1500	1481	311
26	589	1223	1001	1007	626	1075	596	1236	653	1112	1751	905	310	1325	103	1500	1567	1162	180	729	118	1500	1200	374
27	595	1256	936	1087	798	1067	3076	672	616	1160	1490	846	316	1323	347	1473	578	1136	371	800	99	1500	612	350
28	539	1269	909	1075	711	1029	6663	616	601	1156	800	785	667	1322	268	1576	578	783	340	1006	85	1550	433	343
29	529	1281	847	1180	679	1022	2627	560			669	779	672	1127	269	1500	349	690	181	1118	77	1500	331	431
30	606	1282	813	1108	667	1036	1591	381			576	765	690	1097	179	1490	350	674	168	1193	72	1541	317	425
31	1449	1131			628	1043	6375	283			573	707			106	1463			150	1233	70	1313		
Avg.	2651	690	6526	636	856	1122	1606	676	1767	756	611	1129	389	1167	189	1368	891	648	874	515	119	1215	1013	669

DAILY FLOW AND CONTINUOUS RECORDED QUALITY DATA

PHS Station No.: 22
Location: Arkansas River at Arkansas City, Kansas
Water Year: 1961

Basin: Arkansas River
Tributary to: --
Remarks: Records good. Frequent minor stratification.

Equations Used to Compute Constituents--
Chlorides: Log Cl =1.2957 Log Sp.C.-1.4179
Sulfates: SO_4=0.1143 Sp. C.
Dissolved Solids: DS =0.6014 Sp. C.

Discharge (cfs) and Specific Conductance, Micromhos/cm (μmhos)

Day	October		November		December		January		February		March		April		May		June		July		August		September	
	cfs	μmhos	cfs	μmhos	cfs	μmhos	cfs	μmhos	cfs	μmhos	cfs	μmhos	cfs	μmhos	cfs	μmhos	cfs	μmhos	cfs	μmhos	cfs	μmhos	cfs	μmhos
1	1566	1175	8377	369	887	1750	1091	2130	1130	2017	1028	1910	2126	1378	4853	708	724	1965	1164	1853	1390	1345	1593	1269
2	1268	1393	4371	470	852	1781	1059	2150	1172	1985	1007	1953	1851	1312	2514	768	742	2021	1140	1912	1223	1448	1480	1321
3	1186	1500	2558	830	824	1816	1024	2170	1073	1885	977	1989	1853	1407	2568	1144	750	1968	1135	1988	1104	1523	1379	1374
4	1073	1567	2018	1223	843	1828	1011	2190	1015	1834	966	1970	1588	1485	4364	747	1025	1757	1218	2108	1048	1573	1431	1415
5	990	1699	1773	1235	852	1819	1010	2141	937	1850	929	1970	1415	1594	12510	391	2026	1135	1135	1830	1043	1595	1830	1247
6	894	1800	1563	1308	1006	1699	1011	2100	845	1920	912	1956	1276	1677	38587	252	1218	1116	1026	1823	1048	1573	1384	1474
7	839	1800	1395	1457	976	1850	1020	2100	774	1968	899	1988	1179	1667	33313	244	1111	1553	2494	1224	1125	1586	1311	1552
8	801	1862	1298	1570	923	1900	1028	2100	774	1992	879	2010	1141	1574	15817	383	1313	1493	1619	1015	1686	1407	1273	1355
9	745	1900	1203	1667	866	1900	1018	2100	851	1914	876	2005	2235	1135	11188	567	1222	1485	997	1548	1698	1029	1289	1236
10	668	1918	1151	1719	917	1848	999	2100	1061	1802	873	1990	2688	842	8661	636	1131	1381	831	1878	1318	1083	1200	1423
11	629	1944	1104	1744	1444	1704	995	2044	1125	1797	854	1984	3130	888	5728	761	1114	1390	775	1970	1197	1298	1150	1515
12	574	2063	1080	1764	2505	1069	987	1993	1189	1790	839	1995	3479	795	3616	1050	1063	1442	755	2073	1335	1401	1172	1366
13	1233	2183	1063	1842	2349	955	993	2000	1199	1700	816	1998	2946	907	2739	1310	985	1470	744	2186	1539	1426	5588	819
14	6146	635	1058	1875	1780	1115	987	2013	1203	1750	846	1992	2358	1158	2191	1425	3198	1078	779	2226	8797	440	9807	450
15	6295	348	1040	1891	1514	1235	995	2015	1218	1763	875	1911	1953	1373	1871	1580	5513	659	1010	2053	4818	429	9391	375
16	3949	495	1020	1817	1427	1399	998	2013	1215	1793	863	1911	1663	1490	1610	1680	4248	565	919	1970	2873	682	5196	368
17	3200	699	995	1806	1385	1469	1008	1995	1217	1785	858	1929	1478	1600	1388	1750	3105	778	888	1910	2011	933	3965	545
18	4173	628	956	1800	1384	1562	1008	1986	1328	1810	1128	1823	1361	1729	1235	1792	2638	1019	1026	1743	2414	1108	3585	558
19	3128	602	894	1800	1339	1637	995	1985	3335	1145	1385	1446	1177	1806	1171	1800	2803	1219	1086	1833	8975	418	3565	560
20	2831	742	864	1800	1276	1692	980	1995	3378	851	1512	1280	1165	1942	1404	1695	3263	1040	1884	1388	10592	289	3475	575
21	2793	825	843	1813	1194	1712	861	2016	1913	921	1789	1350	1132	1941	1761	1680	2911	934	6518	576	8063	426	4241	597
22	2379	999	837	1850	1132	1812	582	2325	1515	1237	2599	1106	1248	1834	1685	1490	2312	1099	14796	288	6590	516	2898	665
23	2129	1082	819	1918	966	1985	556	2385	1380	1303	2643	991	1730	1573	1446	1510	2018	1325	17852	248	5243	543	2163	829
24	1872	1243	816	1925	934	2084	736	2400	1290	1619	2131	1160	1184	1709	1408	1525	1748	1542	18056	246	4045	603	2353	971
25	1785	1392	816	1925	930	2009	609	2256	1255	1746	1883	1294	1095	1803	1385	1523	1671	1611	10030	322	3495	708	5110	672
26	5369	738	819	1938	1138	1839	585	2050	1198	1760	1664	1465	1041	1830	1324	1610	1550	1644	5671	475	3238	824	4226	482
27	5204	427	849	1925	1208	1839	803	1950	1134	1803	6837	625	999	1876	1216	1639	1426	1707	3782	645	3110	810	3709	720
28	3627	728	934	1906	1188	1951	1024	1750	1086	1860	6083	360	971	1923	1089	1806	1346	1778	2927	835	2605	888	2748	878
29	2322	1219	969	1818	1154	2070	1150	1720			3115	672	941	1921	1007	1811	1294	1778	2343	1004	2230	1000	1978	1135
30	4409	774	913	1712	1140	2090	1250	1950			2123	1218	1034	1837	906	1850	1215	1786	1848	1146	1928	1116	1699	1273
31	8738	460			1126	2110	1230	2087			1914	1406			7791	1936			1620	1242	1725	1203		
Avg.	2652	833	1480	1191	1208	1630	955	2059	1315	1582	1681	1251	1648	1397	5759	604	1889	1200	3486	663	3210	714	3060	748

DAILY FLOW AND CONTINUOUS RECORDED QUALITY DATA

PHS Station No.: 22?
Location: Arkansas River at Arkansas City, Kansas
Water Year: 1962

Basin: Arkansas River
Tributary to: --
Remarks: Records good. Frequent minor stratification.

Equations Used to Compute Constituents--
Chlorides: Log Cl =1.2957 Log Sp.C.-1.4179
Sulfates: SO_4=0.1143 Sp. C.
Dissolved Solids: DS =0.6014 Sp. C.

Discharge (cfs) and Specific Conductance, Micromhos/cm (μmhos)

Day	October		November		December		January		February		March		April		May		June		July		August		September	
	cfs	μmhos	cfs	μmhos	cfs	μmhos	cfs	μmhos	cfs	μmhos	cfs	μmhos	cfs	μmhos	cfs	μmhos	cfs	μmhos	cfs	μmhos	cfs	μmhos	cfs	μmhos
1	1993	1235	7535	585	2103	1700	1338	1645	7318	427	701	2580	1370	2177	1190	1749	9168	235	1420	1462	3917	691	1670	908
2	1633	1287	18696	297	2083	1717	1390	1777	5920	627	1141	2179	1334	2173	1129	1795	12814	326	1401	1582	3591	718	1625	1088
3	1400	1462	15069	292	2078	1774	1444	1917	4150	788	1378	1953	1324	2159	1064	1831	24329	272	1315	1422	3641	805	2447	1152
4	1346	1517	9124	389	2061	1780	1524	1904	3495	988	1562	1912	1340	2161	1021	1821	23506	235	1254	1399	3462	847	2877	931
5	1311	1583	4980	506	2050	1792	1609	1831	3030	1179	1635	1940	1360	2185	986	1840	16550	233	1626	1448	4523	750	2920	763
6	1291	1640	3485	722	2036	1809	1488	1824	2630	1291	1706	1893	1381	2195	960	1810	11513	291	6369	646	5013	527	2842	907
7	1243	1665	2661	948	2008	1802	1143	1906	2354	1394	1482	1906	1404	2185	935	1861	8715	376	7873	532	5761	459	3265	844
8	1200	1685	2188	1155	2033	1805	1048	1910	2156	1499	1388	1900	1389	2105	902	1929	5959	492	5741	412	6042	425	2845	850
9	1179	1702	1915	1324	2099	1801	1161	1949	1970	1635	1351	1933	1364	2101	876	1950	4343	657	4435	497	4811	495	3003	889
10	0838	555	1749	1483	2308	1781	537	2348	1953	1702	1384	1944	1358	1944	854	2019	3288	864	4906	534	3875	658	2865	904
11	0227	403	1679	1589	2100	1618	525	2679	1921	1730	1388	1889	1343	1925	839	2035	2745	1048	6668	498	3224	749	2583	903
12	7156	423	1528	1650	1299	1783	1008	2564	1889	1787	1373	1863	1339	1925	813	2040	2540	1138	5622	411	2740	864	2187	986
13	7149	401	1633	1655	822	2008	1553	2150	1849	1801	1369	1900	1329	1925	765	2013	2253	1200	3727	535	2395	1000	1984	1096
14	4708	525	1683	1459	1063	2141	1582	1884	1821	1800	1358	1985	1308	1888	704	2086	2388	1227	3945	602	2135	1089	1773	1180
15	2991	729	1821	1606	1271	1797	1344	1960	1913	1815	1328	2010	1269	1838	672	2100	2357	1316	8949	449	1904	1219	3911	840
16	2004	1084	6124	846	1575	1721	1251	2037	1963	1783	1286	2030	1225	1893	653	2100	2039	1331	9026	425	1736	1240	9777	302
17	1602	1389	9577	437	2193	1752	1301	2066	1915	1783	1284	2075	1210	1899	597	2068	1881	1307	10032	367	1611	1263	5005	404
18	1368	1556	7097	507	3089	1429	1263	1951	1930	1800	1306	2050	1200	1838	573	2075	1655	1372	7973	379	1499	1292	2591	611
19	1188	1736	5400	533	2489	1302	903	2120	1895	1809	1314	2040	1193	1877	560	2075	1603	1501	6655	460	1375	1367	1995	801
20	1166	1761	4163	681	1649	1328	521	2100	1823	1904	1345	2080	1199	1818	539	1864	1405	1500	5664	502	1220	1448	1724	940
21	1130	1748	3362	945	1490	1405	434	2019	1763	1935	1403	2087	1194	1800	539	1843	1395	1520	4398	574	1063	1509	1671	1085
22	1099	1748	3028	1251	1550	1462	443	2000	1725	1975	1418	2028	1151	1800	631	2119	1439	1566	4244	751	924	1537	8746	595
23	1061	1845	2800	1372	1626	1355	473	1948	1714	2029	1405	2054	1516	1746	637	1844	1325	1505	5467	667	826	1587	10565	343
24	1031	1861	2586	1487	1505	1413	526	1872	1674	1963	1363	2068	1529	1519	666	1948	1362	1540	8558	411	806	1537	6530	405
25	1013	1763	2408	1600	1455	1450	655	1876	1644	1953	1335	1852	1406	1480	590	2003	1424	1589	6484	409	2252	976	6010	478
26	1008	1908	2216	1663	1551	1456	1028	1864	1571	1941	1344	1800	1423	1639	503	2024	1558	1550	4720	543	3215	778	5799	495
27	1001	2003	2060	1728	1600	1516	1712	1452	1315	2126	1379	1887	1275	1600	1058	1739	2129	1410	4135	694	2206	849	4577	619
28	1017	2000	2218	1752	1570	1622	3650	1027	854	2556	1404	2006	1420	1560	2340	759	2463	891	3322	792	1834	1134	4058	670
29	1065	1990	2185	1685	1470	1685	8563	659			1393	2000	1465	1531	1333	869	1839	1153	2670	978	2312	1082	3106	711
30	1059	1967	2140	1680	1363	1702	10378	357			1390	2079	1309	1707	12074	510	1584	1399	3133	991	2248	813	2478	797
31	3572	983			1290	1684	8810	265			1390	2113			13442	270			3770	911	1974	800		
Avg.	2518	949	4437	766	1770	1647	1955	1189	2363	1398	1364	1989	1331	1884	1627	1064	5252	550	5016	572	2714	821	3781	658

DAILY FLOW AND CONTINUOUS RECORDED QUALITY DATA

PHS Station No.: 223
Location: Arkansas River at Wichita, Kansas
Water Year: 1961

Basin: Arkansas River
Tributary to: -
Remarks: Records poor. Frequent major stratification.

Equations Used to Compute Constituents--
Chlorides: Cl =0.20284 Sp. C.
Sulfates: SO_4=0.13955 Sp. C.
Dissolved Solids: DS =0.61075 Sp. C.

Discharge (cfs) and Specific Conductance, Micromhos/cm (μmhos)

Day	October		November		December		January		February		March		April		May		June		July		August		September	
	cfs	μmhos	cfs	μmhos	cfs	μmhos	cfs	μmhos	cfs	μmhos	cfs	μmhos	cfs	μmhos	cfs	μmhos	cfs	μmhos	cfs	μmhos	cfs	μmhos	cfs	μmhos
1	488	750	830	480	353	1720	448	1850																
2	435	850	664	574	353	1765	427	1875																
3	395	925	630	562	367	1793	423	1900																
4	368	1000	600	624	401	1782	421	1900																
5	356	1040	523	979	410	1760	421	1883																
6	336	1140	496	1125	393	1763	421	1801																
7	310	1187	472	1070	391	1729	420	1758																
8	287	1207	456	1216	379	1724	415	1710																
9	266	1207	433	1321	363	1875	414	1670																
10	239	1205	418	1353	431	1700	414	1755																
11	226	1240	413	1398	541	1100	415	2080																
12	219	1160	402	1390	664	800	420	2270																
13	723	708	399	1395	617	800	421	2270																
14	412	413	394	1358	531	925	422	2270																
15	387	695	392	1444	522	1172	427	2270																
16	1173	278	386	1515	513	1277	428	2270																
17	1029	183	379	1464	510	1371	429	2204																
18	635	265	373	1528	497	1450	434	1719																
19	531	431	371	1536	479	1539	435	520																
20	531	588	366	1520	467	1697	433	520																
21	550	624	365	1520	413	1650	190	1110																
22	488	679	363	1524	338	1600	258	1825																
23	415	731	353	1513	277	1603	347	2043																
24	393	902	352	1491	318	1622	304	2172																
25	454	984	357	1498	458	1771	151	2757																
26	472	842	360	1485	484	1625	176	3047																
27	511	788	381	1556	450	1700	239	2472																
28	505	817	382	1586	446	1800	306	2098																
29	608	816	365	1658	460	1800	321	2165																
30	1184	404	363	1661	457	1810	336	1985																
31	996	465			455	1825	343	2010																
Avg.	514	671	435	1232	443	1523	370	1725																

DAILY FLOW AND CONTINUOUS RECORDED QUALITY DATA

PHS Station No.: 224
Location: Little Arkansas River, Valley Center, Kans.
Water Year: 1962

Basin: Arkansas River
Tributary to: Arkansas River
Remarks: Records good.
Stratification nil.

Equations Used to Compute Constituents--
Chlorides: Log Cl =1.3336 Log Sp.C.-1.7652
Sulfates: SO_4=0.0374 Sp.C. + 22
Dissolved Solids: DS =0.6108 Sp. C.

Discharge (cfs) and Specific Conductance, Micromhos/cm (μmhos)

Day	October		November		December		January		February		March		April		May		June		July		August		September	
	cfs	μmhos	cfs	μmhos	cfs	μmhos	cfs	μmhos	cfs	μmhos	cfs	μmhos	cfs	μmhos	cfs	μmhos	cfs	μmhos	cfs	μmhos	cfs	μmhos	cfs	μmhos
1	101	836	351	694	97	908	98	1193	1179	222	83	1145	81	1421	65	1034	3376	117	145	875	171	761	52	570
2	136	937	1013	402	97	930	101	1180	602	310	79	1144	77	1660	64	1068	17214	77	131	1030	248	803	52	588
3	95	730	1432	266	96	940	111	1111	404	370	79	1103	74	1563	60	1013	18848	89	129	1511	183	525	65	562
4	80	578	1309	248	96	985	142	1114	301	370	79	1050	73	1238	58	1324	10243	103	120	1135	136	540	126	323
5	72	584	657	247	94	1041	153	1211	245	529	77	1096	71	1117	57	1509	6871	135	354	511	114	613	218	373
6	66	610	324	310	92	1078	132	1249	205	619	75	1261	67	1045	56	1164	4765	167	322	518	110	698	291	319
7	63	618	211	439	90	1080	144	920	178	657	77	1228	67	1026	53	1106	2668	231	182	569	106	846	503	522
8	61	620	165	526	91	1075	133	931	161	748	78	1252	66	1029	53	1161	1042	361	134	701	93	915	334	264
9	62	615	142	567	94	1058	97	1123	151	804	79	1227	65	1073	52	1166	683	424	124	823	86	937	320	294
10	917	452	128	630	94	1050	74	1144	143	850	91	1133	66	1100	50	1136	507	471	114	799	82	970	233	338
11	2281	143	120	653	85	1082	79	1171	136	892	86	1144	68	1100	47	1167	433	532	135	1008	76	1002	245	329
12	605	244	114	677	79	1078	90	1050	132	909	71	1152	71	1094	45	1280	403	562	147	827	67	1020	218	327
13	950	233	117	661	77	1073	98	1050	126	892	77	1248	70	1091	42	1340	343	633	372	926	62	1037	161	418
14	359	535	105	692	78	1112	91	1050	123	908	61	1223	70	1160	40	1355	290	776	770	364	58	1111	112	767
15	190	524	140	617	80	1165	84	1050	126	966	83	1295	70	1200	39	1394	260	970	1331	324	55	1076	289	293
16	141	564	1088	313	84	1160	79	1050	144	1016	80	1405	68	1275	40	1346	235	1015	1926	292	52	1000	225	321
17	121	581	1969	262	86	1150	76	1036	154	1142	77	1363	66	1345	41	1304	213	869	2167	238	50	1000	93	450
18	114	615	1653	256	84	1140	64	1030	152	1318	76	1286	65	1272	41	1285	196	825	1839	235	45	963	72	555
19	105	625	733	330	84	1140	51	1025	140	1348	74	1266	64	1218	42	1200	182	822	1318	298	46	867	63	606
20	98	625	337	446	84	1169	46	1020	128	1300	73	1281	64	1350	54	1095	173	800	806	470	41	821	55	670
21	94	629	224	487	93	1181	50	1010	119	1343	73	1318	65	1375	65	1014	173	843	612	517	38	809	73	626
22	90	640	186	566	93	1148	56	1000	111	1415	74	1350	65	1400	52	1008	172	850	343	456	37	800	296	474
23	85	690	162	620	88	1098	63	975	106	1447	76	1375	63	1450	46	1013	161	850	241	495	36	794	265	417
24	82	693	146	662	95	1064	68	895	100	1429	89	1447	85	1500	39	1069	222	751	325	574	49	737	317	370
25	77	725	132	710	98	1103	70	869	94	1264	100	1519	117	1955	666	290	273	608	948	353	66	666	393	556
26	74	750	121	743	105	1116	85	850	88	1165	104	1342	100	2110	2297	191	202	697	813	295	76	620	1169	261
27	74	751	112	780	106	1022	1205	323	78	1073	112	1415	88	1677	549	1741	270	800	384	403	231	957	923	310
28	74	781	105	837	97	996	3848	132	75	1038	144	2067	81	1141	280	267	248	925	241	501	152	552	315	306
29	76	801	100	857	95	1061	3505	149			127	2091	74	1031	7223	96	226	526	196	603	80	520	194	388
30	79	799	98	863	100	1095	3873	154			103	1219	67	1006	11405	71	170	572	169	682	60	512	149	466
31	174	777			98	1145	2536	167			90	1293			5585	96			152	762	52	535		
Avg.	245	357	450	368	91	1076	558	284	204	685	85	1349	73	1333	942	1461	2369	158	548	406	89	780	261	373

DAILY FLOW AND CONTINUOUS RECORDED QUALITY DATA

PHS Station No.: 760
Location: Arkansas River near Hutchinson, Kansas
Water Year: 1961

Basin: Arkansas River
Tributary to: --
Remarks: Records good. Frequent minor stratification.

Equations Used to Compute Constituents--
Chlorides: Log Cl =1.25113 Log Sp.C.-1.50138
Sulfates: SO_4=0.1446 Sp. C.
Dissolved Solids: DS =0.06247 Sp. C.

Discharge (cfs) and Specific Conductance, Micromhos/cm (μmhos)

Day	October		November		December		January		February		March		April		May		June		July		August		September	
	cfs	μmhos	cfs	μmhos	cfs	μmhos	cfs	μmhos	cfs	μmhos	cfs	μmhos	cfs	μmhos	cfs	μmhos	cfs	μmhos	cfs	μmhos	cfs	μmhos	cfs	μmhos
1	194	2548	274	1853	226	2275	296	2842	303	2168	355	2425	346	2518	343	2267	344	2279	378	489	337	1909	712	1327
2	183	2695	274	2485	227	2497	287	3003	300	2074	357	2462	341	2570	330	2352	342	2235	487	425	371	1720	634	1455
3	174	2580	276	2200	245	2572	286	2684	265	1754	361	2512	334	2787	395	2149	383	1904	356	674	444	1611	563	1482
4	174	2594	264	2203	254	2639	288	2903	250	1255	356	2693	327	2800	738	1125	380	1876	328	1945	432	1577	680	1101
5	174	2689	252	2302	259	2538	298	2677	231	2554	351	2490	329	2750	1868	566	384	1827	299	1985	874	1430	807	778
6	178	2625	242	2288	254	2727	299	2707	212	2626	350	2508	330	2584	1704	1096	569	1432	286	2094	1559	750	662	1097
7	184	2716	222	2365	247	2423	292	2827	245	2355	349	2428	333	2626	2172	1450	737	1036	280	2054	1338	818	598	1427
8	186	2882	227	2293	235	2716	290	2654	270	2308	343	2474	372	2343	2778	802	794	1033	260	2280	767	1187	575	1462
9	180	2988	238	2416	235	2914	288	2625	308	2197	319	2491	463	1776	2426	1050	805	1093	237	2408	588	1442	539	1689
10	174	2817	242	2569	261	2187	295	2629	325	2152	289	2605	510	1901	1485	1300	794	1032	229	2164	477	1757	501	1493
11	171	2753	241	2526	316	1940	300	2732	359	2177	281	2559	510	2024	1160	1550	709	1090	230	2215	407	1812	470	1442
12	163	2945	247	2429	284	2121	305	2612	327	2465	290	2459	631	2207	997	1700	870	1009	228	2238	356	1819	496	1485
13	163	2797	251	2469	279	2281	310	2585	344	2307	295	2391	566	2219	864	1750	764	1061	237	2255	403	1602	758	764
14	152	3031	255	2360	277	2609	314	2634	346	2445	293	2335	542	2577	794	1800	936	939	283	1980	457	1545	745	1189
15	316	1438	259	2399	299	2624	309	2565	347	2564	404	2068	506	2603	705	1950	903	1246	291	1820	437	1613	1628	461
16	298	824	255	2384	297	2650	297	2568	363	2751	676	1371	448	2703	628	2100	1004	1475	329	1675	1747	643	2246	380
17	199	1597	251	2394	300	2719	291	2808	397	2756	436	1740	424	2744	609	2126	1648	1229	302	1693	3220	312	2597	340
18	195	2112	247	2437	300	2882	286	2553	422	2532	358	1886	407	2877	577	2194	2283	653	593	854	3116	340	2686	342
19	243	1653	245	2407	299	2943	283	2637	376	2646	353	2003	404	2775	553	2193	1953	824	704	637	2587	406	2702	376
20	199	2051	250	2383	288	2996	265	2518	377	2769	367	2136	402	2668	538	2225	1245	999	705	586	2804	516	2080	435
21	194	2274	248	2355	258	3024	148	2964	380	2763	381	2232	388	2615	603	2049	910	1284	1237	388	2608	520	1386	660
22	198	2272	246	2608	213	2977	179	2254	380	2768	397	2407	378	2595	614	1980	803	1416	1310	475	2263	570	1080	900
23	204	2100	239	2438	191	3251	219	2465	379	2630	402	2519	361	2493	555	2065	747	1339	1439	555	1880	659	898	1068
24	209	2082	224	2376	241	3173	184	2804	371	2628	392	2719	367	2238	511	2332	591	1461	1394	637	2015	692	878	1105
25	218	2111	214	2430	280	3001	114	3140	349	2562	382	2937	372	2470	512	2372	535	1595	1163	901	2155	657	731	1197
26	219	2250	224	2515	280	2890	121	3581	349	2568	383	2956	362	2459	478	2346	513	1478	887	1167	1750	777	647	1295
27	218	2175	234	2425	280	2948	151	3146	349	2545	427	2737	351	2361	434	2249	488	1591	758	1208	1425	972	613	1454
28	230	2351	253	2336	305	2748	191	3052	347	2465	398	2700	344	2432	410	2135	452	881	636	1335	1209	1009	536	1524
29	236	2427	244	2304	314	2612	235	3025			367	2816	331	2430	406	2118	435	465	520	1544	1043	1134	466	1651
30	256	1940	236	2350	314	2592	250	2499			343	2784	344	2258	375	2336	404	483	421	1686	903	1217	439	1727
31	284	1616			305	2675	265	2268			381	2624			349	2196			351	1704	797	1237		
Avg.	205	2237	246	2373	269	2673	256	2707	331	2449	369	2403	404	2458	868	1498	791	1157	553	1022	1316	782	1012	829

DAILY FLOW AND CONTINUOUS RECORDED QUALITY DATA

PHS Station No.: 760
Location: Arkansas River near Hutchinson, Kansas
Water Year: 1962

Basin: Arkansas River
Tributary to: --
Remarks: Records good. Frequent minor stratification.

Equations Used to Compute Constituents--
Chlorides: Log Cl =1.25113 Log Sp.C.-1.50138
Sulfates: SO_4=0.1446 Sp. C.
Dissolved Solids: DS =0.06247 Sp. C.

Discharge (cfs) and Specific Conductance, Microohos/cm (µmhos)

Day	October		November		December		January		February		March		April		May		June		July		August		September	
	cfs	µmhos	cfs	µmhos	cfs	µmhos	cfs	µmhos	cfs	µmhos	cfs	µmhos	cfs	µmhos	cfs	µmhos	cfs	µmhos	cfs	µmhos	cfs	µmhos	cfs	µmhos
1	401	1765	444	1529	471	2550	415	2657	1429	1678	284	3377	393	2811	396	2401	323	1800	715	1631	1395	875	510	1558
2	370	1766	582	1016	466	2600	496	2566	1279	2001	375	3011	389	2821	398	2153	695	646	751	1513	1599	870	498	1577
3	356	1795	423	1296	462	2750	561	2662	1028	2070	555	2642	406	2810	407	2196	745	687	665	1453	3025	509	479	1439
4	341	1821	367	1693	470	3000	603	2454	911	2288	547	2360	436	2839	412	2124	791	1033	707	1571	3894	403	1103	731
5	329	1898	363	1994	459	3050	577	2329	843	2273	496	2409	454	2889	402	2120	679	1398	2858	570	4230	371	1176	783
6	315	1992	368	2101	447	3100	486	2705	791	2318	509	2465	439	2704	391	2261	580	2055	3516	433	4999	377	862	1163
7	302	2008	373	2299	445	3150	425	2706	753	2427	505	2492	426	2729	384	2225	552	2225	3034	573	4126	429	673	1706
8	300	1985	373	2243	438	3200	391	2713	729	2481	499	2456	422	2611	378	2319	555	2266	2608	557	2831	600	634	1745
9	306	1973	363	2249	484	3250	254	3176	695	2602	468	2501	407	2535	371	2232	561	2283	3044	536	2080	721	594	1795
10	306	1983	356	2184	450	3300	136	3224	659	2665	446	2565	404	2470	354	2303	564	2161	3714	370	1553	909	574	1558
11	295	1950	350	2435	319	3350	123	3863	624	2751	434	2633	402	2449	338	2348	580	2222	2426	513	1273	1052	552	1751
12	283	2056	344	2400	154	3300	150	3402	596	2761	429	2733	385	2475	337	2485	707	2140	1525	755	1063	1258	562	1729
13	277	2027	330	2400	154	3200	194	3400	571	2774	382	2733	364	2462	340	2454	915	1620	1587	918	948	1219	809	1445
14	268	2095	314	2300	200	3000	200	3342	566	2824	373	2872	356	2500	331	2552	877	1488	1417	956	862	1307	1516	640
15	259	2186	382	1875	250	2810	173	3128	588	2759	392	2868	352	2537	324	2846	715	1645	3453	403	791	1388	1205	638
16	248	2242	838	753	300	2614	161	2939	570	2861	422	2931	357	2535	316	2636	686	1836	3316	424	740	1500	912	823
17	243	2427	690	1200	350	2604	154	2676	556	2909	424	2935	371	2517	308	2635	648	1767	2837	521	684	1500	756	1025
18	236	2239	487	1550	388	2467	141	2766	563	2974	425	2891	367	2412	297	2632	587	2014	2516	666	614	1568	644	1292
19	232	2219	471	1900	344	2536	109	2761	538	2909	432	2917	355	2410	342	2197	538	2208	1881	848	560	1682	572	1350
20	231	2240	511	2150	269	2744	96	3404	514	2863	449	2958	374	2287	271	2408	506	2290	2082	921	518	1647	1154	879
21	231	2250	300	2300	313	2471	99	2923	521	2705	440	2912	704	1064	282	2289	533	2219	2710	635	480	1747	3321	351
22	229	2260	501	2300	438	2475	107	2898	506	2624	415	2913	540	1679	263	2566	472	2210	2370	630	453	1719	3176	392
23	235	2278	471	2300	499	2440	119	2740	494	2629	404	2915	617	1572	259	2625	440	2425	2496	714	445	1703	2109	485
24	239	2149	445	2300	543	2659	137	2602	474	2696	394	2900	501	1773	252	2700	487	2050	1642	1017	533	1626	1591	652
25	238	2082	528	2275	585	2914	176	2553	453	2618	399	2800	421	2227	249	2730	476	2203	1437	1127	510	1679	1404	811
26	231	2302	624	2200	529	2587	359	2288	383	2756	410	2941	407	2292	219	2918	489	2325	1140	1312	990	897	1448	806
27	224	2300	547	2200	422	2461	1276	1080	273	3039	424	3077	466	2133	215	2895	556	2179	978	1457	1430	616	1286	827
28	222	2397	493	2350	378	2563	2316	930	240	3297	439	2885	443	2170	378	1319	552	2208	1030	1412	1408	654	1161	918
29	247	2253	478	2500	330	2918	2312	963			453	2811	418	2244	515	583	677	1986	1643	763	954	871	1014	1074
30	308	1580	469	2500	314	3070	1880	1282			431	2745	400	2430	265	2125	832	1503	1963	655	571	1349	930	1180
31	331	1686			353	2898	1610	1321			406	2825			232	2410			1685	742	610	1300		
Avg.	278	2044	459	1962	388	2821	524	1790	648	2503	434	2768	426	2323	330	2278	611	1839	2056	704	1489	773	1108	882

DAILY FLOW AND CONTINUOUS RECORDED QUALITY DATA

PHS Station No.: 767
Location: Rattlesnake Creek near Raymond, Kansas
Water Year: 1961

Basin: Arkansas River
Tributary to: Arkansas River
Remarks: Records fair. Occasional minor stratification.

Equations Used to Compute Constituents--
Chlorides: Log Cl =1.1180 Log Sp.C.-0.9335
Sulfates: SO_4=0.0380 Sp. C.
Dissolved Solids: DS =0.5600 Sp. C.

Discharge (cfs) and Specific Conductance, Micromhos/cm (μmhos)

Day	October		November		December		January		February		March		April		May		June		July		August		September	
	cfs	μmhos	cfs	μmhos	cfs	μmhos	cfs	μmhos	cfs	μmhos	cfs	μmhos	cfs	μmhos	cfs	μmhos	cfs	μmhos	cfs	μmhos	cfs	μmhos	cfs	μmhos
1	17	4256	63	2935	38	3733	65	4648	56	3333	76	4042	83	4663	58	3813	28	4595	30	3892	100	2211	94	2217
2	14	4638	61	3170	58	3750	55	5080	60	3586	74	4025	86	4501	59	3794	22	5093	26	4202	132	2418	80	2276
3	19	4481	58	3340	57	3800	65	4902	64	3493	69	4145	75	4179	75	3871	23	5946	24	4299	122	3139	70	2375
4	28	4379	64	3030	57	3950	64	4667	56	3241	67	4151	74	4226	123	3903	24	5442	24	4232	120	3898	50	2829
5	28	4438	51	2910	54	4100	63	4500	50	3201	67	3994	64	4239	189	3700	24	4985	23	4371	116	3994	54	2490
6	26	4502	51	2850	42	4200	63	4382	44	3017	67	4025	71	4149	293	3650	33	5121	20	4584	112	3947	54	2439
7	24	4618	53	2876	43	4274	61	4200	40	3303	68	3907	71	4024	324	3600	44	4591	20	4708	104	3684	55	2540
8	21	4719	62	2966	49	3763	60	4200	38	3630	57	4098	83	3795	280	3600	44	5056	19	4603	95	3677	55	2633
9	13	5249	40	3481	49	3857	61	4300	50	3572	60	4028	85	3989	220	3600	47	5099	19	4602	83	3650	55	2598
10	12	5552	44	3950	56	3739	60	4400	66	3784	73	3583	96	4200	199	3469	49	4595	19	4627	73	3506	56	2542
11	10	5439	53	3850	54	4074	57	4180	79	4075	67	3673	101	4300	166	3520	43	4297	18	4701	55	3562	51	2643
12	8	6138	48	3900	47	4473	56	4179	86	4178	64	3799	84	5600	121	3924	41	4025	18	4851	43	3783	47	2783
13	9	5928	45	3700	36	5593	56	4114	89	4412	55	4182	106	4800	93	4250	40	4045	18	4550	50	3595	42	3270
14	13	5101	45	3750	38	4444	53	4106	94	4992	63	3865	107	3633	81	4038	49	4632	22	4549	54	3782	42	3200
15	14	4743	45	3700	64	4856	54	4457	95	5052	65	3741	76	3842	61	4300	49	5952	19	4539	59	3715	53	2693
16	15	4647	43	3675	63	5986	57	4195	94	4644	62	3763	81	4163	62	4400	70	4934	20	4189	64	3542	52	2713
17	18	4663	45	3650	78	5744	57	4250	94	4492	65	3565	80	4361	62	3980	86	3390	19	4038	72	3204	53	2579
18	21	4383	46	3625	91	4929	55	4265	78	5095	71	3780	80	4625	50	4340	86	2940	20	3972	75	3038	50	2686
19	24	4329	47	3600	87	5068	44	4918	74	5424	82	3872	81	4600	49	4131	77	3438	24	3489	103	3298	48	2718
20	25	4401	42	3575	74	5338	52	4789	88	4824	98	3897	74	4448	49	4091	65	3800	36	3990	130	3276	48	2728
21	37	3805	45	3525	55	7715	45	5003	84	4336	112	3860	64	4555	51	4110	58	3776	50	3800	185	2437	41	2873
22	38	3489	49	3500	38	5866	38	6025	83	4254	118	4045	63	4473	52	4385	56	3573	56	3800	319	1412	38	2934
23	44	3405	41	3600	41	5083	43	4222	80	4207	118	4688	64	4158	52	4474	43	3911	73	3708	452	994	33	3077
24	60	3333	49	3700	55	4927	36	3971	74	4808	119	4712	61	3860	56	4045	42	3620	166	3004	463	966	35	3084
25	60	2958	48	3800	71	4797	31	4643	78	4483	125	4108	51	4307	56	3539	42	3501	248	1320	404	1149	32	3136
26	53	2681	47	3900	86	4758	35	4482	74	4321	124	4111	57	3928	47	4025	39	3625	266	837	332	1441	35	2895
27	68	2699	48	4000	82	4534	37	3972	71	4392	98	4187	60	3670	51	3686	38	3616	236	885	276	1606	34	2753
28	64	2280	45	4100	77	4394	36	3892	76	4209	90	4420	57	3756	52	3333	35	3709	188	1008	216	1698	32	2951
29	58	2300	39	4200	69	4542	40	3731			84	5135	59	3727	42	3657	33	3721	150	1095	164	1805	48	2677
30	60	2455	31	4305	67	4748	45	3658			87	4692	63	3615	39	3929	33	3749	126	1426	132	1869	55	2602
31	63	2578			65	4745	50	3550			85	4453			36	3933			104	2176	113	2047		
Avg.	31	3521	48	3529	59	4733	51	4379	72	4275	82	4119	75	4243	102	3703	45	4153	68	2178	155	2143	50	2673

DAILY FLOW AND CONTINUOUS RECORDED QUALITY DATA

PHS Station No.: 767
Location: Rattlesnake Creek near Raymond, Kansas
Water Year: 1962

Basin: Arkansas River
Tributary to: Arkansas River
Remarks: Records fair. Occasional minor stratification.

Equations Used to Compute Constituents--
Chlorides: Log Cl =1.1180 Log Sp.C.-0.9335
Sulfates: SO_4=0.0380 Sp. C.
Dissolved Solids: DS =0.5600 Sp. C.

Discharge (cfs) and Specific Conductance, Micromhos/cm (μmhos)

Day	October		November		December		January		February		March		April		May		June		July		August		September	
	cfs	μmhos	cfs	μmhos	cfs	μmhos	cfs	μmhos	cfs	μmhos	cfs	μmhos	cfs	μmhos	cfs	μmhos	cfs	μmhos	cfs	μmhos	cfs	μmhos	cfs	μmhos
1	35	3226	57	4187	95	3925	119	4434	190	3554	48	4150	62	3700	54	4315	21	4881	58	3700	56	3348	39	3340
2	38	3065	81	4114	92	4068	97	4083	177	3534	65	4003	64	3808	56	3940	34	5525	60	4200	60	2934	43	3392
3	39	2978	74	4789	102	3842	97	4000	162	3602	86	3731	72	3485	56	3638	62	4461	61	4600	66	2422	47	3043
4	40	2912	98	4134	97	3779	98	4027	150	3625	91	3763	69	3449	53	3643	71	4187	67	4423	66	2299	56	2709
5	41	2873	92	3776	90	4289	91	4309	127	3925	69	4219	58	3862	53	3515	76	4073	98	3761	64	2321	58	3020
6	42	2800	96	3716	91	4061	74	7227	129	3769	83	3426	58	3759	46	3733	92	4306	96	3500	63	2446	62	2785
7	49	2729	93	3808	84	3936	67	6971	123	3566	86	3531	57	3778	41	4068	106	4301	84	3569	67	2363	65	2348
8	39	2798	88	3814	88	3873	68	4327	115	3611	82	3420	60	3702	44	3674	110	3849	76	3470	63	2549	63	2411
9	23	3467	89	3871	92	3601	60	4493	111	3717	78	3705	56	4076	38	3991	142	3221	68	3510	58	2600	57	2810
10	24	4135	84	3784	64	3974	52	6100	108	3756	83	3726	65	3743	38	4005	160	3025	78	3750	53	2697	58	3042
11	27	3412	77	3813	43	3893	57	4076	104	3803	81	3738	63	3973	39	3695	157	3310	49	4500	45	2825	61	3001
12	28	3351	73	3911	44	3801	77	3949	98	3899	69	4226	60	4026	36	3845	143	3642	42	4750	40	2875	61	3050
13	29	3173	61	3949	50	3730	89	3720	94	3925	65	4521	60	4251	42	3805	135	3483	43	4832	35	2900	61	3002
14	25	3390	68	3663	54	3600	93	3632	90	4287	82	4124	64	3978	40	3937	126	2949	42	4598	32	2925	49	2900
15	21	3515	92	3513	56	3700	81	3767	102	4467	85	3729	57	3834	39	3981	119	2787	47	4347	34	3084	47	2681
16	22	3535	94	3648	58	3800	74	3383	105	4525	80	3780	62	3513	34	4231	115	3018	54	4148	31	3141	47	2500
17	20	3626	126	3968	62	3900	66	3270	114	4466	78	3758	58	3409	33	4535	104	3106	65	4071	28	3288	46	2500
18	22	3397	151	4351	63	4000	59	3265	105	4525	77	3658	52	3646	23	4833	86	3331	79	3908	29	3251	43	2528
19	20	3580	156	4473	57	4200	46	3640	101	4665	71	3843	53	3479	17	5455	76	4098	84	4127	26	3222	44	2537
20	26	3368	158	4578	63	3486	41	3196	104	4393	71	4003	57	3336	15	5774	69	3894	80	4251	25	3318	40	2702
21	30	3138	160	4441	72	3278	42	3339	103	4120	63	4143	65	3204	15	5531	69	3859	67	4265	23	3461	57	2906
22	43	2903	142	4583	78	3581	46	3585	93	4438	69	4064	51	4156	17	5014	67	3718	63	4150	19	3710	58	2992
23	43	2929	130	4820	72	4749	54	3610	91	4334	70	3991	48	4984	14	5233	67	3733	53	4200	15	4166	62	3021
24	41	3033	119	4615	76	3971	60	3574	79	4602	74	3999	53	4286	13	5688	67	4078	49	4175	23	4460	107	2483
25	38	3077	109	4462	87	3894	65	3371	62	5636	63	4714	55	3782	14	5572	62	4176	47	4125	20	4637	161	1682
26	34	3202	99	4332	108	4275	71	2881	52	4515	69	4712	58	3403	14	5297	71	4131	47	4050	22	4049	192	1485
27	39	3137	94	4332	118	4463	83	2723	46	4596	74	4187	61	3432	14	4779	75	4219	49	3900	25	3543	204	1473
28	43	3050	98	4125	115	4450	111	3420	42	4463	76	3796	50	4215	21	5474	77	4163	50	3800	26	3133	189	1457
29	41	3189	100	4072	113	4473	149	3538			60	4117	55	3673	20	5587	68	3752	49	3775	27	2920	183	1470
30	32	4076	103	3928	125	4513	180	3686			69	4073	50	4071	17	5436	60	3550	53	3700	36	3083	169	1500
31	39	4056			136	4602	201	3513			71	3829			18	5286			52	3650	47	3122		
Avg.	33	3202	102	4173	82	4050	83	3929	106	4044	74	3932	58	3783	31	4240	90	3661	62	4012	39	2930	81	2231

DAILY FLOW AND CONTINUOUS RECORDED QUALITY DATA

PHS Station No.: 220
Location: Arkansas River at Great Bend, Kansas
Water Year: 1961

Basin: Arkansas River
Tributary to: --
Remarks: Records fair. Occasional minor stratification.

Equations Used to Compute Constituents--
Chlorides: Cl =0.0442 Sp. C.
Sulfates: SO_4=1.4757 Log Sp.C.-1.9190
Dissolved Solids: DS =0.8095 Sp. C.

Discharge (cfs) and Specific Conductance, Micromhos/cm (μmhos)

Day	October		November		December		January		February		March		April		May		June		July		August		September	
	cfs	μmhos	cfs	μmhos	cfs	μmhos	cfs	μmhos	cfs	μmhos	cfs	μmhos	cfs	μmhos	cfs	μmhos	cfs	μmhos	cfs	μmhos	cfs	μmhos	cfs	μmhos
1	43	1296	93	1350	84	1350	120	1490	110	1200	119	1740	127	1500	102	1400	108	1450	122	1174	57	907	178	1067
2	29	1266	93	1360	78	1365	116	1478	114	730	126	1748	131	1500	99	1407	108	1475	119	1160	78	896	167	1121
3	22	1274	90	1370	81	1390	122	1423	84	1400	123	1750	127	1500	130	1265	144	1393	113	1180	138	834	154	1137
4	18	1266	87	1380	86	1390	119	1420	73	1440	122	1700	126	1500	170	1167	580	588	111	1160	843	346	146	1150
5	16	1265	87	1390	85	1390	116	1500	79	1450	127	1716	122	1503	369	784	707	416	85	1150	516	292	138	1164
6	13	1293	84	1400	87	1378	119	1500	84	1450	119	1830	117	1502	736	522	608	458	59	1150	228	407	142	1165
7	13	1322	84	1410	93	1339	121	1500	84	1480	118	2000	118	1440	554	515	669	513	54	1150	103	547	136	1113
8	13	1316	81	1400	90	1315	117	1500	84	1500	107	1500	141	1295	338	785	646	451	52	1140	61	707	127	1100
9	12	1263	81	1389	93	1300	116	1500	121	1624	112	1500	148	1190	276	938	459	501	50	1130	36	763	115	1109
10	11	1280	84	1379	98	1300	117	1500	134	1650	126	1500	141	1227	233	1057	335	732	47	1120	20	855	92	1102
11	12	1271	84	1395	104	1300	121	1507	161	1612	123	1500	130	1284	198	1166	317	764	46	1110	11	933	79	1118
12	19	1332	84	1395	99	1337	119	1517	163	1602	121	1500	127	1370	182	1235	266	943	69	1100	7	963	78	1136
13	34	1391	85	1368	90	1405	113	1543	149	1672	111	1500	125	1400	170	1250	266	1172	66	1035	15	932	89	1164
14	34	1335	90	1390	95	1394	113	1527	137	1800	115	1500	117	1430	159	1224	297	1352	74	1075	198	558	217	1056
15	38	1350	93	1378	100	1400	120	1465	140	1860	121	1570	116	1420	148	1200	444	1274	338	733	1239	259	592	565
16	48	1345	93	1353	104	1400	122	1485	143	1880	119	1563	112	1369	144	1236	945	740	1048	357	2348	210	495	424
17	48	1335	93	1309	102	1419	122	1516	141	1900	123	1471	109	1342	140	1299	750	609	1154	290	1301	289	304	641
18	93	1265	90	1275	102	1425	119	1460	138	1900	141	1389	108	1392	133	1342	577	660	489	430	1006	463	243	829
19	108	1200	85	1272	104	1393	121	1400	130	1900	141	1330	105	1400	130	1350	410	788	274	610	1984	292	214	935
20	119	1200	91	1240	108	1457	121	1463	136	1900	136	1310	108	1400	127	1350	384	956	213	650	1703	263	197	974
21	124	1200	90	1243	85	1644	72	1507	141	1900	133	1323	108	1400	130	1327	509	754	559	500	1112	340	184	1012
22	128	1200	87	1289	60	1697	78	1477	143	1875	132	1339	108	1400	134	1260	354	867	1060	280	692	496	151	1042
23	126	1200	84	1400	71	1699	86	1423	136	1828	121	1395	107	1408	127	1269	331	925	756	360	648	488	161	1065
24	119	1200	84	1400	95	1591	69	1436	131	1805	122	1400	102	1430	126	1313	270	892	448	510	471	612	159	1080
25	109	1165	83	1400	125	1469	44	1518	130	1825	125	1400	97	1435	122	1310	228	965	307	554	355	742	150	1106
26	99	1135	79	1400	151	1447	45	1452	131	1825	126	1400	97	1430	119	1320	201	1052	214	632	299	817	96	1114
27	96	1166	81	1280	129	1458	49	1398	135	1780	127	1400	101	1400	112	1328	177	1113	150	747	263	870	96	1115
28	91	1147	80	1400	120	1493	48	1370	127	1800	122	1415	102	1400	109	1344	159	1153	116	831	236	931	83	1127
29	91	1100	85	1380	111	1473	59	1388			126	1420	102	1400	115	1368	139	1236	91	890	218	987	69	1145
30	93	1100	84	1350	116	1463	73	1375			129	1431	108	1400	116	1400	124	1170	70	922	203	1020	77	1150
31	95	1100			121	1488	98	1463			127	1500			112	1420			59	945	189	1047		
Avg.	62	1205	86	1357	99	1429	100	1474	124	1693	124	1475	116	1399	189	1033	384	768	271	532	535	401	171	924

DAILY FLOW AND CONTINUOUS RECORDED QUALITY DATA

PHS Station No.: 220
Location: Arkansas River at Great Bend, Kansas
Water Year: 1962

Basin: Arkansas River
Tributary to: --
Remarks: Records fair. Occasional minor stratification.

Equations Used to Compute Constituents--
Chlorides: Cl =0.0442 Sp. C.
Sulfates: SO_4=1.4757 Log Sp.C.-1.9190
Dissolved Solids: DS =0.8095 Sp. C.

Discharge (cfs) and Specific Conductance, Micromhos/cm (μmhos)

Day	October		November		December		January		February		March		April		May		June		July		August		September	
	cfs	μmhos	cfs	μmhos	cfs	μmhos	cfs	μmhos	cfs	μmhos	cfs	μmhos	cfs	μmhos	cfs	μmhos	cfs	μmhos	cfs	μmhos	cfs	μmhos	cfs	μmhos
1	77	1150	99	1095	185	2300	209	2361	388	1769	91	2065	250	2600	189	1540	155	1149	311	1031	1706	350	136	1143
2	74	1150	104	1105	189	2296	196	2354	341	1901	117	1964	246	2600	182	1538	182	1201	295	1130	3208	280	143	1122
3	68	1160	130	1105	189	2305	183	2373	316	2037	186	1846	241	2534	176	1562	198	1168	429	991	2985	240	141	1005
4	62	1150	133	1164	189	2384	152	2473	300	2085	230	1769	231	2301	172	1540	200	1166	1743	333	3994	200	152	1113
5	58	1150	133	1179	185	2402	151	2513	290	2177	211	1725	226	2173	168	1550	203	1078	1508	380	4923	220	138	1178
6	66	1176	130	1193	179	2400	158	2638	283	2325	196	1851	223	2093	162	1535	192	1213	1096	300	2120	300	133	1115
7	62	1194	127	1223	179	2397	155	2565	280	2441	213	1972	222	1961	151	1535	182	1294	973	450	1358	450	138	1066
8	60	1180	126	1242	182	2400	147	2588	284	2500	221	2110	218	1880	144	1580	183	1358	1590	260	955	580	141	1142
9	60	1175	123	1258	173	2405	118	2653	282	2556	219	2241	215	1880	135	1573	204	1447	1304	370	715	760	150	1166
10	58	1166	122	1285	110	2340	78	2688	275	2678	222	2432	215	1892	126	1554	203	1521	727	618	561	850	188	1050
11	52	1165	122	1320	46	2299	82	2749	275	2716	226	2483	217	1831	111	1543	293	1268	449	884	468	900	348	806
12	45	1179	121	1343	51	2311	100	2526	278	2733	230	2563	215	1788	105	1489	474	730	342	1001	407	910	1357	334
13	40	1197	112	1340	69	2401	110	2334	270	2735	231	2635	214	1830	99	1442	355	924	279	1079	379	920	1375	266
14	39	1179	108	1324	79	2314	116	2283	268	2681	236	2688	210	1836	94	1472	346	1115	246	1125	350	940	733	349
15	40	1151	127	1316	90	2161	101	2309	271	2616	235	2705	206	1825	93	1499	307	1401	305	1006	324	960	440	503
16	39	1168	144	1246	96	2052	90	2374	263	2595	238	2710	203	1850	96	1524	259	1560	315	880	301	980	316	644
17	46	1187	150	1329	81	1962	82	2334	255	2578	238	2700	200	1860	95	1488	238	1737	278	1014	266	1000	262	764
18	56	1191	156	1470	70	1872	83	2290	238	2485	235	2700	199	1870	93	1455	230	1871	314	908	238	1040	355	662
19	58	1174	154	1500	60	1789	85	2300	265	2251	235	2708	197	1880	87	1392	223	1957	344	762	214	1080	2912	253
20	59	1179	151	1568	55	1908	65	2400	252	2185	242	2675	195	1900	90	1286	219	2071	369	665	205	1120	4165	245
21	55	1195	153	1686	78	1901	71	2800	238	2195	242	2613	192	1800	92	1385	220	2040	519	577	166	1136	2510	301
22	54	1196	152	1734	90	1880	91	3001	227	2125	243	2613	200	1800	73	1512	212	2085	355	729	166	1172	1268	421
23	48	1195	157	1784	102	1879	126	2838	217	2111	246	2600	190	1750	68	1520	211	2125	256	975	178	1083	901	534
24	49	1205	162	1906	129	2011	196	2717	197	2101	246	2600	197	1674	68	1520	213	2070	252	997	255	886	806	547
25	50	1233	171	1952	157	2062	247	2053	160	2083	247	2600	207	1507	66	1529	211	1885	294	843	433	689	733	582
26	48	1242	173	2003	184	2137	275	2009	123	2125	251	2563	193	1477	78	1535	213	1832	356	624	315	708	629	651
27	48	1240	181	2100	184	2176	299	1959	101	2160	257	2528	193	1445	97	1537	207	1882	1150	303	218	921	511	746
28	56	1248	182	2157	159	2233	316	1899	91	2200	254	2500	196	1567	125	1548	206	1820	1611	352	196	962	437	839
29	72	1206	182	2178	178	2355	349	1815			251	2537	196	1550	119	1588	243	1656	1544	356	172	1013	389	905
30	83	1173	178	2253	191	2361	358	1695			250	2594	195	1500	130	1684	405	854	881	472	153	1044	397	896
31	118	1075			211	2328	396	1667			250	2600			154	1134			810	569	162	1100		
Avg.	58	1176	142	1567	133	2239	167	2227	251	2331	225	2435	210	1902	117	1501	239	1458	685	525	938	439	743	453

DAILY FLOW AND CONTINUOUS RECORDED QUALITY DATA

PRS Station No.: 529
Location: Red River at Index, Arkansas
Water Year: 1961

Basin: Red River
Tributary to: --
Remarks: Records very good. Occasional minor variation.

Equations Used to Compute Constituents--
Chlorides: Cl =0.2195 sp.C.-43
Sulfates: SO_4 =0.1284 Sp.C.
Dissolved Solids: DS =0.6200 Sp.C.

Discharge (cfs) and Specific Conductance, Micromhos/cm (µmhos)

Day	October		November		December		January		February		March		April		May		June		July		August		September	
	cfs	µmhos	cfs	µmhos	cfs	µmhos	cfs	µmhos	cfs	µmhos	cfs	µmhos	cfs	µmhos	cfs	µmhos	cfs	µmhos	cfs	µmhos	cfs	µmhos	cfs	µmhos
1	601	563	23275	1752	3126	1721	13760	1245	7373	1734	9240	846	61325	515	3788	1275	5483	1654	3268	1586	5683	1280	2635	1580
2	5458	556	21525	1797	2716	1582	25025	924	6671	1725	7935	1037	59900	423	3731	1340	4683	1102	3865	1414	5162	1460	2441	1680
3	4153	662	18450	1899	2515	1520	29525	678	6091	1705	6848	1044	50950	385	4550	1461	3958	800	4425	1303	4494	1556	2649	1775
4	3420	565	14338	1899	2675	1643	25233	572	5258	1675	6933	869	40775	411	5718	1376	3595	623	4500	1690	3774	1602	3314	1800
5	3381	455	11005	1841	2953	1580	19067	440	5578	1675	7403	818	33100	546	6730	1299	3383	555	4406	1870	3349	1600	3593	2025
6	3340	457	8525	1800	4499	1474	15550	428	4964	1672	7855	1060	28900	732	14080	924	3895	749	3725	1915	3886	1600	3731	2080
7	4183	649	6775	1800	13113	1271	13425	487	4226	1614	7920	1200	25525	876	34650	581	4466	1209	2869	1880	4406	1770	3696	2000
8	11300	761	5833	1750	25350	789	12400	636	4531	1517	8568	1121	20888	965	43800	618	4835	1608	2618	1810	4331	1922	3280	2018
9	13138	468	5150	1705	38013	383	12350	809	5485	1406	7595	1050	18425	1060	37600	376	5108	1636	3255	1890	4069	1917	2614	2030
10	11205	626	4269	1700	44500	420	12738	988	7988	1180	7773	988	20313	1307	28213	337	4834	1280	3451	1600	3855	1888	2220	2000
11	8468	661	3881	1700	51063	370	13413	1169	7711	838	9398	733	20738	1302	19438	252	6145	1005	4578	1800	3405	1862	2249	1850
12	5930	731	4294	1694	62375	287	13225	1262	10458	673	10033	777	18313	1262	13075	242	11055	957	5259	1788	3096	1842	2821	1745
13	4274	836	4523	1446	66125	319	11150	1037	11163	635	11040	806	16775	1337	5788	256	11415	910	4976	1831	3497	1850	3519	1435
14	3253	909	4885	1488	56750	300	9450	908	9570	646	10385	807	16100	1440	7490	340	8823	751	4358	1810	3881	1890	3769	1837
15	2791	897	5504	1681	38900	352	8755	1018	7696	658	8160	821	16600	1485	6290	536	6689	681	4134	1510	4031	1935	4625	1914
16	3099	911	5526	1800	26100	414	8443	1302	6115	594	5785	906	16600	1478	5581	730	4901	864	12223	927	4088	1889	11850	1668
17	3720	965	5108	1850	20000	441	8213	1498	5351	558	4600	926	15638	1460	4848	871	4419	915	22425	807	4331	1802	16038	880
18	4125	1332	5278	1787	17175	613	8213	1575	5655	560	4675	834	12938	1466	4223	1029	5070	919	25275	564	4369	1835	14913	790
19	3978	1723	5963	1694	14725	928	8375	1575	6520	574	5258	669	9718	1500	3863	1143	4970	1343	19775	516	4397	1642	12950	1062
20	3331	1745	6444	1633	13063	1235	8213	1594	8305	858	5983	630	7333	1473	4181	1191	4545	1641	13700	530	5755	1202	10565	1460
21	2713	1720	6785	1685	11875	1404	8148	1573	16200	960	7693	720	6363	1334	4550	1226	4294	1526	9833	557	5778	1039	7940	1559
22	2348	1660	6418	1742	10493	1477	7920	1576	23450	591	8860	1068	6333	1255	5268	1095	3780	1498	7778	607	5275	932	5546	1651
23	13080	1576	5759	1731	8518	1500	7693	1629	25092	427	7668	987	5830	1308	6285	1438	3353	1620	6845	529	5094	1053	4200	1675
24	26925	1841	4816	1685	7008	1491	7628	1664	7473	342	5761	778	5500	1497	6468	1568	3260	1471	7278	750	4303	1226	3919	1448
25	28125	1869	3831	1700	6253	1450	7340	1694	15938	434	4910	726	5750	1424	6725	1358	4770	1132	9158	1144	3211	1192	3900	1295
26	28350	1900	3484	1669	5803	1410	6698	1678	14913	456	4738	632	5701	1455	7308	1190	4935	893	13365	1163	2698	1240	3938	1611
27	29325	1900	4128	1579	5450	1400	6273	1625	11800	573	8276	491	4989	1572	7175	921	7563	1094	14900	797	3045	1316	4144	1773
28	29925	1900	4369	1507	5351	1400	6500	1570	10263	711	18750	430	4189	1605	5729	1022	7313	1446	13000	485	3036	1153	3970	1998
29	30000	1924	3774	1742	5059	1411	7403	1573			22742	429	4181	1540	4949	1042	6243	1594	10598	756	2533	1400	3276	1893
30	29700	1961	3260	1786	5108	1417	7920	1652			29750	453	4144	1390	5061	862	4106	1578	8293	1015	2421	1750	2880	1851
31	27300	1933			7165	1383	7859	1733			43392	500			5526	810			6718	1051	2598	1750		
Avg.	11495	1539	7239	1753	18833	616	11545	1072	9376	823	10195	723	18794	902	10528	705	5462	1120	8408	959	3995	1535	5239	1492

DAILY FLOW AND CONTINUOUS RECORDED QUALITY DATA

PHS Station No.: 529
Location: Red River at Index, Arkansas
Water Year: 1962

Basin: Red River
Tributary to: --
Remarks: Records very good. Occasional minor variation.

Equations Used to Compute Constituents--
Chlorides: Cl =0.2195 Sp.C.-43
Sulfates: SO_4=0.1284 Sp.C.
Dissolved Solids: DS =0.6200 Sp.C.

Discharge (cfs) and Specific Conductance, Micromhos/cm (µmhos)

Day	October		November		December		January		February		March	
	cfs	µmhos	cfs	µmhos	cfs	µmhos	cfs	µmhos	cfs	µmhos	cfs	µmhos
1	4015	1546	4470	1934	21813	842	7335	1010	16275	395	18688	329
2	4720	1575	3921	2000	17963	926	7540	1376	12700	457	14738	317
3	5440	1888	3275	2000	14875	1030	7308	1451	10785	623	12525	285
4	6038	1867	3079	1917	14063	1266	6703	1473	9593	775	10720	335
5	6628	1500	3458	1705	13288	1637	6040	1309	8598	895	9083	492
6	8068	1095	4950	1606	11725	1708	5385	1106	7843	994	7615	566
7	9360	575	6323	1780	12275	1648	5510	1016	7145	1098	6303	685
8	9168	500	5578	1300	16738	1282	5985	909	6410	1150	5281	678
9	7828	775	4244	1159	18763	800	6035	1048	5278	1197	4471	670
10	6333	820	3305	1067	20425	650	5785	1229	4246	1205	4850	650
11	5360	930	3105	1067	23450	725	5040	1227	3681	1171	6740	497
12	5040	1150	3570	1099	26550	715	4170	1081	3490	1006	7458	465
13	4678	1675	3751	1180	26625	600	3770	1118	3350	875	7088	594
14	4713	1575	3710	1649	23900	460	4770	972	3228	813	6270	676
15	10915	1625	3770	1621	20388	444	7878	847	4274	703	5420	742
16	15625	1650	4415	1490	18138	498	9948	1247	6603	522	4410	816
17	15588	1370	5915	1500	17713	518	10738	1245	7608	569	3890	882
18	13438	1420	6620	1133	18813	566	10393	1006	8440	667	4090	782
19	11338	1525	6673	900	20025	692	9845	711	8440	1142	4321	695
20	10205	1700	6508	1326	19863	702	9353	511	7608	1128	4388	1002
21	9873	1862	6590	1487	17550	594	9158	571	6785	1065	4151	1267
22	9840	1936	7675	1444	15225	550	9718	922	6563	1013	3734	1281
23	9680	1969	10845	1106	13088	603	11148	971	7530	757	3553	1173
24	8515	1983	28375	616	11010	765	14125	934	11083	414	3929	1121
25	6943	1939	47275	448	9648	908	18075	872	14175	412	5338	866
26	5483	1861	53163	420	8808	1051	18600	704	21738	580	7523	692
27	4280	1826	50950	477	9025	1146	21650	661	27300	445	12115	743
28	3851	1780	41325	505	6933	1251	29700	458	24575	359	16175	536
29	4395	1700	31850	622	5893	1263	33400	385			15113	357
30	4801	1634	25988	743	5103	1200	29838	402			11600	269
31	4700	1864			6080	1112	22463	405			10238	243
Avg.	7640	1501	13156	784	15637	825	11529	771	9459	679	7800	558

Day	April		May		June		July		August		September	
	cfs	µmhos	cfs	µmhos	cfs	µmhos	cfs	µmhos	cfs	µmhos	cfs	µmhos
1	12570	310	30000	265	1839	1200	13075	1530	5281	1641	2844	1516
2	25925	403	25688	290	2101	1276	13925	1457	4855	1457	4265	1484
3	29175	326	20225	257	4483	1183	15325	1204	4681	1240	5294	1407
4	23488	282	15600	291	18888	457	13163	992	5715	1369	5653	1482
5	17863	264	12350	324	23388	413	9318	886	8463	1505	6170	1500
6	14575	260	9760	367	19100	222	7373	926	8990	1551	6333	1487
7	12363	307	8293	568	14400	277	7173	1700	7464	1398	5830	1311
8	11925	528	7573	703	11725	[illegible]	7400	1406	5995	1183	5950	1213
9	12450	755	6438	988	14663	263	7628	1381	4534	1055	13013	[illegible]
10	12600	775	5230	1105	20525	1002	7508	[illegible]	3631	1197	22713	[illegible]
11	11325	759	4250	1150	22675	1041	6438	1745	3576	1388	31330	508
12	8875	781	3750	1125	24400	956	5211	1707	4906	1353	19570	[illegible]
13	6908	782	4144	1074	39400	1237	4290	1388	5728	1509	16400	[illegible]
14	6290	657	4294	913	47963	1580	4556	1602	5958	1778	10865	344
15	6085	581	4023	1071	47388	1600	5317	1632	5684	1776	8128	355
16	6035	768	3536	1392	44025	1607	5275	1630	4961	1685	7028	362
17	5963	978	3040	1425	42600	1687	5675	1700	3880	1637	6900	683
18	6633	1101	2469	1407	38688	1769	5725	1723	3724	1600	6843	1193
19	8120	1087	2134	1368	34513	1820	5300	1736	4371	1600	6393	1358
20	8658	962	1998	1350	33813	1908	4294	1667	4966	1630	5588	1449
21	9453	906	2005	1350	32963	1925	3988	1717	5010	1655	4845	1444
22	9393	719	2109	1302	30625	1770	5094	1679	4946	1605	5183	1368
23	8208	764	2150	1125	28125	1472	5725	1512	4416	1636	5275	1347
24	7840	845	2120	983	25500	1507	5800	1560	3476	1680	5775	1413
25	12785	922	1995	1215	24900	1680	5701	1613	3520	1657	5800	1469
26	23600	523	1854	1416	26475	1756	5008	1578	4425	1631	3638	1470
27	27000	319	1798	1431	27688	1721	4403	1585	4970	1620	4533	1507
28	27300	264	1799	1400	22538	1637	5060	1636	5176	1716	3579	1486
29	28350	255	1804	1354	17888	1581	6096	1614	5075	1670	2658	1431
30	30300	268	1823	1305	14750	1567	6385	1605	4135	1611	3159	1378
31			1804	1213			6120	1634	2863	1541		
Avg.	14432	498	6324	622	25254	1415	6889	1471	4996	1531	8460	847

709-562 O-65-10

DAILY FLOW AND CONTINUOUS RECORDED QUALITY DATA

PRS Station No.: 527
Location: Red River at Arthur City, Texas
Water Year: 1961

Basin: Red River
Tributary to: --
Remarks: Records good. Stream uniformity is affected by flow from Clear Boggy Creek and Blue River.

Equations Used to Compute Constituents--
Chlorides: Log Cl =1.3433 Log Sp.C.-1.8189
Sulfates: SO_4=0.1280 Sp.C.
Dissolved Solids: DS =0.6244 Sp.C.

Discharge (cfs) and Specific Conductance, Micromhos/cm (µmhos)

Day	October		November		December		January		February		March		April		May		June		July		August		September	
	cfs	µmhos	cfs	µmhos	cfs	µmhos	cfs	µmhos	cfs	µmhos	cfs	µmhos	cfs	µmhos	cfs	µmhos	cfs	µmhos	cfs	µmhos	cfs	µmhos	cfs	µmhos
1	2056	630	19721	1912	2263	1818	16950	960	5553	1785	3630	1638	29581	1174	2108	1649	2258	1634	3779	1977	1998	1756	3198	2034
2	2382	1211	14050	1880	2338	1816	16667	627	4883	1753	4553	1655	24408	1170	2074	1189	1905	1598	3459	1975	1875	1739	3264	2065
3	1993	1571	10644	1849	2020	1858	12100	589	3816	1713	5053	1705	20825	1098	2191	1241	3413	1978	2361	1853	3681	2014	3347	2064
4	938	1378	6998	1791	3356	1865	9563	896	3302	1685	4657	1683	20625	1049	3391	1183	4079	1932	1543	1684	4063	2037	3108	2066
5	3262	836	5830	1826	3367	1434	7945	1301	2957	1686	4366	1700	19627	1191	5348	1431	3773	1609	2380	1822	3673	2042	2365	1933
6	8740	1054	4823	1852	2503	913	7625	1469	2379	1566	2948	1672	14094	1465	15269	917	4013	1131	2932	1974	3408	2025	1168	1700
7	10525	1036	2374	1735	8895	954	7625	1642	2217	1259	2270	1339	12200	1719	17227	963	3691	799	2762	1833	3096	2020	978	1726
8	8765	1063	1336	1608	19413	786	8194	1683	7483	857	4126	1677	12300	1775	16617	920	4829	1441	4947	2000	2448	1921	2194	2019
9	5095	1103	3990	1818	20900	537	10621	1351	9688	740	5447	1526	11925	1771	8242	557	8678	1187	5296	1979	2294	1918	2703	2104
10	2218	1134	3493	1882	20221	401	8750	1080	9250	769	5238	1597	11650	1771	6681	689	10931	892	3977	1849	3162	2055	3013	2116
11	1054	1115	4065	1893	28033	341	7180	1356	7771	804	4546	1630	11550	1809	6026	963	7160	961	2695	1636	3326	2078	2989	2118
12	1069	1196	3320	1934	31396	465	6660	1660	5306	686	3634	1607	12100	1817	4906	1184	4894	1176	1896	1460	3333	2090	2908	2014
13	2624	1657	4713	1948	26913	673	6660	1803	3905	678	2077	1386	12833	1800	4157	1421	2843	1274	3678	1914	3319	2087	6406	1650
14	3903	1749	3848	1930	16940	782	6802	1850	2968	740	1510	1260	13992	1755	4159	1611	3076	1587	4743	1909	3918	1715	2246	1262
15	4413	1748	3363	1900	15525	914	6286	1850	3329	1055	1686	1250	12900	1805	3315	1629	4868	1916	6197	1663	2970	1462	4158	1267
16	3597	1616	5237	1650	15706	1624	6273	1850	3828	1452	2315	1208	9871	1759	2046	1581	3729	1770	6873	1500	2942	1343	7163	1783
17	1801	1635	5625	1550	13625	1684	6171	1799	4363	1669	2514	1454	5572	1580	2438	1646	3499	1823	6282	1287	5385	1057	14888	1890
18	947	1280	6138	1450	13350	1752	6449	1835	4388	1524	4103	1334	4141	1587	3466	1907	3265	1800	5413	928	4309	1295	9304	1986
19	961	1266	6824	1550	12950	1770	6539	1850	7452	1128	6956	1089	5877	1844	3853	1955	2503	1696	3908	933	4342	1438	3636	1711
20	5265	1687	4670	1600	10671	1754	6630	1895	9005	787	6643	894	4813	1754	4047	1959	2139	1708	4103	1679	4999	1434	2417	1720
21	19161	1754	3282	1650	6285	1681	6401	1895	12058	553	2361	763	4679	1763	3971	1927	1779	1628	4378	1911	3153	1548	2841	1900
22	31500	1800	2135	1675	5366	1687	6114	1795	17346	706	2000	750	5102	1821	3225	1790	3055	1953	4204	1926	1662	1424	2868	2000
23	30888	1796	2236	1697	5621	1762	5320	1748	11558	889	2240	862	5521	1838	2897	1746	3552	1960	5521	1701	1748	1662	3388	2085
24	30225	1790	3874	1813	4864	1703	4853	1746	7473	1139	2257	1032	3864	1700	5533	1389	4351	1896	8038	1076	2782	1974	3905	1950
25	30800	1788	3474	1839	5296	1785	5223	1751	6028	1342	2729	1384	2667	1666	5838	1065	5524	1799	9558	1066	2212	1873	2796	1800
26	31325	1839	2217	1790	4543	1742	7371	1788	6158	1566	2518	1387	2468	1688	3274	1020	3533	1658	11792	1627	1405	1719	1889	1840
27	30888	1933	2339	1730	4498	1750	8118	1800	4210	1396	4069	1275	3585	1818	2748	1457	1753	1453	6840	1535	1997	1986	2094	1943
28	29511	1932	2165	1765	4810	1773	7483	1800	2779	1247	10858	950	2729	1730	3492	1204	2161	1523	4467	1756	2236	1999	3522	2134
29	29613	1930	1439	1728	6953	1711	7375	1785			12983	1172	2296	1693	4555	691	3645	1904	3896	1833	1843	1945	3810	2120
30	29373	1930	1752	1727	8679	1486	5704	1770			23496	1163	2208	1620	2789	578	3920	1981	3632	1900	1407	1767	3273	2105
31	22575	1930			11475	1161	5193	1784			34913	1171			2003	1113			2917	1848	2963	2012		
Avg.	12322	1741	4869	1793	10899	1079	7725	1469	6181	1058	5699	1274	10193	1515	5016	1176	3959	1511	4660	1599	2966	1767	4745	1805

DAILY FLOW AND CONTINUOUS RECORDED QUALITY DATA

PRS Station No.: 527
Location: Red River at Arthur City, Texas
Water Year: 1962

Basin: Red River
Tributary to: --
Remarks: Records good. Stream uniformity is affected by flow from Clear Boggy Creek and Blue River.

Equations Used to Compute Constituents--
Chlorides: Log Cl =1.3433 Log Sp.C.-1.8189
Sulfates: SO_4=0.1280 Sp.C.
Dissolved Solids: DS =0.6264 Sp.C.

Discharge (cfs) and Specific Conductance, Micromhos/cm (µmhos)

Day	October		November		December		January		February		March		April		May		June		July		August		September	
	cfs	µmhos	cfs	µmhos	cfs	µmhos	cfs	µmhos	cfs	µmhos	cfs	µmhos	cfs	µmhos	cfs	µmhos	cfs	µmhos	cfs	µmhos	cfs	µmhos	cfs	µmhos
1	4920	1611	2163	1932	12125	1791	4756	1769	5201	1517	4811	1016	19256	426	11727	496	8103	545	13958	872	4992	1239	3679	1751
2	3494	1621	2958	2091	12900	1918	2833	1593	4900	1573	4101	1198	14863	300	7668	625	18792	551	8941	1145	7963	1624	6268	1702
3	3115	939	4597	1968	11635	1878	2030	1603	4755	1605	3181	1359	11094	285	5539	1028	25481	211	5390	1492	8370	1379	5190	1565
4	6670	771	6459	1536	8625	1786	3034	1597	4655	1628	2594	1210	8675	480	5063	1311	18258	243	6107	1720	6586	1098	4361	998
5	8250	1038	3631	1446	8713	1655	3871	1796	4667	1637	2206	1191	6157	920	5267	1511	10918	208	6400	1772	3560	1668	3185	1119
6	6932	1144	2420	1644	12165	1260	3559	1767	2746	1658	1808	1067	6971	1125	4823	1319	7913	750	6174	1833	3780	1539	6333	1201
7	6223	1497	1666	1678	13163	1235	3366	1737	1625	1227	1809	1010	8879	750	3268	1291	13885	1620	6001	1863	2886	1529	9985	923
8	3639	1820	2333	1771	10162	1450	2628	1611	1516	1118	2455	1401	9219	650	2043	1111	18446	1673	5480	1747	4057	1664	20459	567
9	3802	1950	3303	2049	11935	1350	1828	1383	1575	1351	2397	1473	6031	650	2125	1096	23725	1260	4119	1706	6194	1749	33072	405
10	3266	1885	2967	2015	16488	1050	2586	1450	1528	1300	2363	1467	3593	750	3487	1549	23110	1220	2627	1638	6118	1548	25271	336
11	3248	1892	2618	2021	19100	850	3527	1699	1606	1300	2473	1500	3657	1000	3557	1613	35662	1617	4016	1777	6222	1747	11845	360
12	6952	1768	2586	2023	19131	825	5683	1836	1567	1375	2263	1505	4198	1575	3283	1605	67842	1702	4647	1805	5981	1722	6367	496
13	17468	1650	2820	2013	16277	830	5731	1803	1537	1392	1619	1739	6580	1520	2700	1517	50825	1645	4637	1733	4203	1702	5863	1258
14	19264	1775	3311	1768	12633	1000	4738	1675	2475	1629	1506	1146	3910	1506	2409	1512	65725	1699	4044	1836	3019	1644	5857	1490
15	12073	1890	3621	1851	9942	1300	3172	1232	4272	1821	2582	1603	4075	1500	1518	1347	41400	1865	4683	1824	4381	1698	5845	1807
16	13023	1973	4682	2032	8336	1430	3166	930	4660	1715	3027	1727	4257	1450	1230	1312	38405	1875	4219	1796	5568	1707	5262	1574
17	10530	2075	4559	2011	9813	1100	3683	1329	3293	1632	2792	1827	3310	1450	1188	1252	33138	1850	2739	1683	5509	1736	4415	1508
18	9631	2120	5009	2018	10737	950	5016	1633	2558	1536	2387	1662	3463	1586	1923	1526	31090	1850	2989	1906	5703	1729	3519	1633
19	9877	2203	3602	1872	10531	925	3616	1706	2088	1627	1780	1506	3868	1616	2089	1705	31633	1835	5044	1503	5544	1736	4799	1650
20	10636	2210	3667	1642	10651	950	4846	1711	1865	1157	1246	1304	5631	1557	2030	1688	28900	1700	4972	1670	4266	1716	4252	1565
21	9017	2182	1839	1510	8465	1300	4651	1702	2006	1201	1587	1161	3570	1565	1203	1675	27175	1576	4884	1721	2957	1668	5003	1667
22	6322	2072	2621	1550	7161	1675	5980	1704	2857	1536	2363	1380	3190	1486	1247	1670	25303	1737	5007	1729	4219	1716	4268	1639
23	6495	1900	21562	791	6615	1658	9281	1338	3993	1539	4103	1123	4660	1028	1080	1656	22913	1803	3589	1707	5459	1732	4868	1620
24	7653	1800	24200	752	6651	1709	7462	999	7150	1177	5536	1087	3493	672	1521	1615	21925	1803	2959	1711	5963	1697	3044	1680
25	7867	1862	24125	967	5144	1632	5921	1335	10873	936	6572	889	12000	525	1217	1551	22075	1790	4148	1733	5734	1741	2165	1462
26	6207	2093	22675	982	3545	1560	6070	1189	7006	853	8136	632	14200	460	1815	1616	19797	1710	5331	1729	5873	1775	3286	1563
27	6396	2082	21644	1075	2812	1601	11175	961	6263	522	6338	393	13838	473	1371	1610	17650	1623	5335	1668	3563	1731	4633	1686
28	6221	2102	20509	1089	4510	1668	17469	792	4572	469	5055	562	16381	405	1193	1613	10790	1614	5157	1598	3298	1676	4835	1716
29	5288	2030	17891	1104	3611	1790	12800	800			5210	958	21869	400	1800	1385	9164	1379	3986	1500	3077	1680	5826	1700
30	2777	1913	16454	1509	6116	1847	7038	1169			3392	1102	18162	284	1875	1126	11806	1086	4023	1500	5098	1739	7361	1581
31	1938	1808			6038	1825	5639	1397			12184	687			2168	852			3557	1601	5319	1783		
Avg	6851	1806	8271	1263	9901	1316	5671	1369	3609	1316	3498	1058	8271	703	2913	1228	24398	1519	5060	1605	5032	1659	7472	1025

DAILY FLOW AND CONTINUOUS RECORDED QUALITY DATA

PHS Station No.: 526
Location: Clear Boggy Creek near Caney,
Water Year: 1961 Oklahoma

Basin: Red River
Tributary to: Red River
Remarks: Records poor. Stratification nil.

Equations Used to Compute Constituents--
Chlorides: Cl =0.1235 Sp.C.
Sulfates: SO_4=0.0063 Sp.C. + 28
Dissolved Solids: DS =0.5970 Sp.C.

Discharge (cfs) and Specific Conductance, Micromhos/cm (μmhos)

Day	October		November		December		January		February		March		April		May		June		July		August		September	
	cfs	μmhos	cfs	μmhos	cfs	μmhos	cfs	μmhos	cfs	μmhos	cfs	μmhos	cfs	μmhos	cfs	μmhos	cfs	μmhos	cfs	μmhos	cfs	μmhos	cfs	μmhos
1	57	382	248	362	37	846	2483	470	81	850	127	650	3954	300	86	750								
2	38	408	141	409	36	831	1623	430	80	865	120	648	2509	350	83	750								
3	31	420	111	426	36	836	543	420	73	870	116	650	768	527	82	730								
4	31	409	98	440	38	840	325	428	69	870	115	650	526	530	136	698								
5	1725	270	81	462	44	837	246	466	71	871	124	631	403	530	532	796								
6	2166	316	75	476	107	815	204	547	84	871	155	599	329	534	1353	516								
7	586	331	70	486	408	610	173	580	123	764	197	598	280	544	294	598								
8	163	359	67	564	596	350	153	580	185	596	197	634	253	550	218	557								
9	106	395	64	650	1225	275	138	576	429	521	145	588	256	550	189	575								
10	80	433	58	650	1407	250	126	614	597	561	114	627	334	610	304	648								
11	67	483	56	650	3434	200	122	640	438	525	103	628	334	670	135	611								
12	58	546	57	655	3176	210	121	659	271	525	100	626	899	629	99	532								
13	51	599	52	668	1524	220	118	680	194	531	95	633	572	623	84	522								
14	183	450	51	682	476	300	116	680	157	589	90	650	380	620	74	550								
15	166	350	51	728	335	350	116	681	136	606	88	651	264	618	63	601								
16	78	270	48	750	252	400	114	694	126	601	89	664	209	615	53	632								
17	56	275	48	754	200	450	108	727	144	547	111	661	178	610	49	650								
18	107	325	48	752	166	500	102	754	1103	287	225	591	160	610	46	670								
19	501	330	44	755	146	550	100	754	238	419	180	582	149	610	45	680								
20	908	340	43	755	131	600	97	760	488	460	158	733	142	619	74	600								
21	246	270	43	752	119	625	94	760	494	383	155	737	136	630	71	575								
22	133	275	44	789	111	628	92	756	259	401	160	750	127	650	274	400								
23	104	310	44	821	101	653	92	828	213	454	146	775	121	670	1312	310								
24	82	345	43	827	98	673	90	894	184	507	119	800	114	680	391	350								
25	77	421	43	826	95	685	85	943	165	524	107	800	109	690	144	454								
26	610	347	43	825	94	722	84	940	158	535	1304	375	105	700	506	300								
27	651	369	43	828	90	745	77	945	153	582	1687	360	98	710	1454	210								
28	373	392	42	850	108	760	83	950	139	650	824	425	94	720	840	250								
29	652	394	41	872	201	666	97	942			533	475	90	730	138	325								
30	707	342	38	837	707	682	94	907			2181	375	88	740	97	375								
31	320	333			1265	557	86	850			4308	250			80	449								
Avg	358	335	65	602	541	337	261	548	245	502	457	409	466	470	300	427								

DAILY FLOW AND CONTINUOUS RECORDED QUALITY DATA

PHS Station No.: 522
Location: Red River near Colbert, Oklahoma
Water Year: 1961

Basin: Red River
Tributary to: --
Remarks: Records very good. Occasional minor stratification.

Equations Used to Compute Constituents--
Chlorides: Cl =0.2020 Sp.C.
Sulfates: SO_4 =0.1387 Sp.C.
Dissolved Solids: DS^4 =0.6187 Sp.C.

Discharge (cfs) and Specific Conductance, Micromhos/cm (μmhos)

Day	October		November		December		January		February		March		April		May		June		July		August		September	
	cfs	μmhos	cfs	μmhos	cfs	μmhos	cfs	μmhos	cfs	μmhos	cfs	μmhos	cfs	μmhos	cfs	μmhos	cfs	μmhos	cfs	μmhos	cfs	μmhos	cfs	μmhos
1	481	2000	9353	2000	3275	2010	3664	2030	2936	1952	4013	2000	9006	2010	1433	2190	3546	2157	765	2195	3828	2159	3223	2193
2	488	1990	4650	1989	2894	2008	4253	2022	2434	1968	3491	2050	9406	2010	2638	2186	3094	2146	780	2174	3758	2200	2361	2200
3	2996	1990	3889	1930	446	2000	4764	2011	1951	1977	3189	2100	9870	2018	2969	2174	934	2142	3504	2183	3263	2200	343	2200
4	3323	1945	3033	1903	495	2010	4843	2003	896	1953	1244	2100	9903	2020	3653	2180	784	2122	1386	2156	3055	2200	301	2200
5	3258	1896	655	1900	3171	2002	5945	2030	706	1954	1303	2100	10158	2074	3301	2181	2592	2115	4154	2174	2359	2200	2025	2191
6	2865	1894	1578	1900	3294	2029	5606	2213	1826	1928	3209	2114	10688	2100	1150	2190	2809	2123	4729	2196	1388	2200	2593	2195
7	1301	1900	3609	1900	3214	2080	4564	2302	2168	1920	3814	2171	10539	2100	573	2182	2973	2113	4406	2200	2869	2200	3043	2205
8	170	1900	2691	1894	3466	2080	4033	2181	2374	1940	3640	2100	9994	2100	2309	2148	3088	2110	2111	2200	3303	2200	3074	2218
9	381	1890	3669	1900	3854	2075	4711	2150	1541	1973	3196	2100	9919	2100	2659	2118	3006	2124	545	2200	3139	2188	2730	2220
10	2454	1895	4830	1900	4529	2058	4850	2409	851	1996	1938	2110	10074	2113	2586	2165	1661	2134	2235	2200	3176	2190	2540	2212
11	2453	1943	4025	1900	8313	2050	5013	2330	670	2004	389	2119	10100	2140	2853	2200	1121	2114	4193	2200	2950	2200	4185	2210
12	3596	1991	3280	1900	7819	2032	5236	2158	759	2462	236	2101	10113	2133	3000	2200	3756	2143	4131	2200	1829	2198	3971	2199
13	3459	1976	3282	1900	4990	2018	4743	2238	2389	2352	1345	2100	10009	2123	1203	2200	3775	2200	3998	2200	1516	2182	5191	2198
14	1448	1990	4740	1900	3660	2000	4976	2186	2806	2238	1614	2100	8151	2133	835	2198	2560	2200	3543	2200	1854	2187	8289	2180
15	180	1995	5064	1952	9426	2000	4685	2170	3790	2221	2139	2073	3136	2144	2538	2194	3301	2200	1960	2200	2193	2200	8856	2160
16	349	1941	5434	1992	10128	2000	5399	2139	2416	2199	2860	2075	2388	2132	3126	2192	1870	2200	665	2200	2558	2175	6400	2149
17	2759	1934	4483	1986	9845	1992	5225	2147	2605	2209	2130	2080	4200	2159	3418	2182	1615	2200	3559	2196	2736	2185	1504	2137
18	6094	1990	4086	1994	8738	1998	5130	2221	914	2252	325	2080	2955	2186	3438	2181	661	2200	5413	2180	2553	2198	2525	2119
19	10306	2031	2221	2000	5495	1985	5356	2019	1176	2138	156	2080	3045	2180	2965	2190	2319	2200	3852	2171	779	2199	2415	2165
20	20804	2009	695	2305	4175	2033	5080	2000	4145	2050	841	2068	3819	2195	2213	2169	3204	2200	3500	2171	620	2183	2828	2208
21	29401	2010	2885	1995	4126	2056	4136	2000	3850	2100	949	2070	3866	2207	1530	2152	3570	2183	3525	2179	2548	2194	3361	2200
22	30351	2015	3874	2051	3136	2050	3960	2000	3559	2150	1429	2054	2005	2209	2866	2154	4498	2158	2030	2190	2281	2179	3429	2195
23	30235	2000	2780	2100	3901	2063	4785	2000	3746	2200	1944	2020	640	2200	1588	2160	3853	2166	4191	2153	803	2158	1569	2189
24	30349	1990	1084	2100	3363	2042	6181	2000	4046	2000	1430	2020	2028	2200	1708	2180	561	2151	4978	2141	1604	2171	1010	2134
25	30483	1983	2405	2100	3460	2021	6648	1985	1878	2350	2285	2020	2523	2200	1948	2191	448	2151	4070	2150	2063	2180	3111	2103
26	30178	2022	840	2100	3789	2008	5749	1981	859	2400	4216	2020	1400	2200	1078	2200	3056	2162	3704	2156	1470	2179	3804	2100
27	27430	2072	464	2094	5219	2014	5888	1990	3196	2000	5796	2028	1360	2200	394	2200	3748	2169	3574	2130	591	2167	3665	2159
28	23785	2100	2389	2075	4789	2023	4294	1989	3754	2050	5784	2030	1248	2198	604	2191	3778	2183	3369	2130	2678	2182	3071	2182
29	20395	2105	1871	2027	4596	2030	4134	1980			6679	2015	196	2188	2039	2191	3556	2188	1803	2130	3206	2192	2526	2198
30	19264	2055	2634	2010	5525	2030	4681	1980			7476	2010	198	2190	926	2200	2670	2192	671	2130	3068	2190	529	2200
31	14670	2000			4334	2030	3820	1969			7520	2010			2618	2183			3076	2130	3448	2188		
Avg.	11474	2019	3216	1971	4757	2023	4915	2091	2294	2238	2793	2055	5764	2104	2134	2179	2614	2164	3046	2174	2370	2189	3149	2178

DAILY FLOW AND CONTINUOUS RECORDED QUALITY DATA

PRS Station No.: 522
Location: Red River near Colbert, Oklahoma
Water Year: 1962

Basin: Red River
Tributary to: --
Remarks: Records very good. Occasional minor stratification.

Equations Used to Compute Constituents--
Chlorides: Cl =0.2020 Sp.C.
Sulfates: SO_4 =0.1387 Sp.C.
Dissolved Solids: DS =0.6187 Sp.C.

Discharge (cfs) and Specific Conductance, Micromhos/cm (umhos)

Day	October		November		December		January		February		March		April		May		June		July		August		September	
	cfs	umhos	cfs	umhos	cfs	umhos	cfs	umhos	cfs	umhos	cfs	umhos	cfs	umhos	cfs	umhos	cfs	umhos	cfs	umhos	cfs	umhos	cfs	umhos
1	379	2191	3660	2200	9911	2169	738	2085	3294	2000	1258	1938	1665	1825	2578	1973	1484	1924	4121	1950	4581	1935	2103	1945
2	2363	2192	3131	2200	6188	2154	2855	2100	3309	2000	921	1929	3354	1802	3361	2000	235	1926	5351	1955	3589	1934	473	1944
3	2759	2200	1765	2200	4943	2136	3016	2095	2820	2000	363	1931	3421	1919	3626	2000	851	1912	5681	1983	3959	1952	1859	1952
4	2634	2200	559	2200	4955	2137	2604	2081	475	1991	290	1901	3044	1987	2635	2000	5564	1920	5804	1990	2030	1987	3915	1927
5	2799	2200	919	2193	4989	2160	2510	2074	403	1966	1481	1900	3450	1958	378	2000	9243	1957	6540	1960	946	1977	2391	1961
6	3286	2208	2710	2199	5219	2166	694	2080	643	1994	1540	1955	3590	1953	365	2000	9786	1960	5309	1977	4788	1922	2145	1979
7	2989	2209	2984	2200	5293	2160	910	2057	681	2000	1410	1968	776	1943	2433	2000	9569	1950	3446	1982	5428	1912	2389	1986
8	2453	2200	2481	2189	4488	2147	2419	2043	620	2000	1541	1931	661	1903	2738	2000	10281	1960	1765	1997	5509	1906	2376	1975
9	3279	2200	2091	2180	3173	2130	3771	2041	755	1982	1575	1916	2478	1900	2510	2000	14523	1964	4161	1969	5425	1889	780	1957
10	5630	2200	2184	2190	3320	2128	4501	2017	738	1963	265	1912	2530	1912	2045	2000	25200	1950	4475	1990	4956	1914	3065	1906
11	8643	2200	2454	2195	4535	2120	4049	2000	940	1952	318	1876	3014	1912	1778	2000	35463	1950	4430	1953	2756	1961	4324	1906
12	9765	2200	2454	2182	4790	2120	2710	1993	3599	1969	1996	1841	2594	1925	273	2000	39975	1937	4560	1945	2070	1996	4834	1887
13	9864	2200	3798	2180	4749	2126	979	1975	3741	1973	2430	1824	3189	1925	38	2000	39988	1919	4456	1965	4444	1892	5186	1850
14	9686	2200	4185	2218	4710	2119	1404	1948	3205	1971	2745	1917	3058	1925	309	2000	39700	1910	3180	1973	4936	1910	5014	1826
15	9203	2200	4273	2222	4331	2110	2629	1918	2015	1995	1874	1961	1658	1916	1334	1963	37750	1939	839	1983	4786	1897	3399	1800
16	9170	2200	4301	2200	3118	2119	4271	1900	1280	1965	1021	1958	2845	1900	1563	1938	32800	2017	2959	1986	4735	1888	2740	1774
17	9093	2200	3819	2200	3164	2114	4231	1953	471	1948	166	1969	2534	1529	1585	1940	29963	2005	4643	1935	4660	1901	4210	1724
18	9370	2200	788	2200	4344	2100	3661	1993	558	1932	245	1955	2434	1950	1399	1950	25438	1968	4549	1948	2873	1944	4378	1765
19	8161	2200	725	2200	4616	2100	3791	2000	1934	1933	1459	1955	2396	1950	351	1949	20350	1965	4789	1942	2013	1957	4583	1841
20	5203	2200	3029	2200	4515	2131	4383	2000	2646	1945	1615	1952	1951	1950	300	1929	19588	1961	4643	1900	4528	1924	4673	1832
21	2495	2200	3738	2195	4444	2150	3829	1976	2819	1964	1893	1942	1008	1950	995	1931	19513	1953	2889	1900	4899	1890	4039	1864
22	764	2194	6638	2178	4363	2150	2976	1930	2824	1950	1834	1905	514	1943	505	1964	19500	1973	2759	1900	4879	1902	1730	1874
23	3128	2192	9386	2171	3078	2147	3160	1928	2569	1936	1021	1900	401	1940	1088	1963	19450	1976	4530	1885	4971	1904	986	1858
24	3818	2188	9739	2181	1913	2116	2808	1952	411	1929	236	1900	1264	1965	509	1963	18438	1962	4925	1938	4553	1891	3858	1866
25	3763	2200	9630	2185	1128	2113	3178	2000	378	1919	674	1900	646	1968	330	1977	13651	1950	4813	1934	1576	1973	4018	1870
26	3744	2200	9134	2174	4061	2120	3275	2000	2246	1943	1463	1894	569	1950	770	1979	9668	1967	3826	1915	756	1970	4384	1865
27	3230	2200	8550	2176	4633	2114	3318	2000	1798	1979	1415	1891	670	1950	300	1964	6056	1969	2781	1987	4108	1871	5323	1874
28	1135	2200	8764	2191	4856	2103	3295	1985	2096	1980	1775	1900	1663	1948	251	1956	4795	1969	3164	1953	4769	1898	5945	1863
29	700	2200	9449	2200	4721	2112	3289	1980			1610	1900	964	1937	131	1937	4955	1982	2938	1965	4641	1897	5515	1853
30	2639	2200	10470	2174	2965	2100	3281	1980			1488	1895	2395	1926	764	1923	6016	1981	5063	1917	4920	1882	3424	1828
31	2564	2200			680	2096	3281	1988			814	1868			2010	1920			5943	1926	4688	1907		
Avg.	4668	2204	4594	2188	4264	2132	2962	1996	1760	1970	1250	1912	2024	1924	1266	1979	17660	1956	4172	1950	3993	1912	3469	1865

DAILY FLOW AND CONTINUOUS RECORDED QUALITY DATA

PHS Station No.: 520
Location: Washita River near Durwood, Oklahoma
Water Year: 1961

Basin: Red River
Tributary to: Red River
Remarks: Records good. Occasional minor stratification.

Equations Used to Compute Constituents--
Chlorides: Cl =0.0624 Sp.C.
Sulfates: Log SO_4=1.3372 Log Sp.C.-1.6246
Dissolved Solids: DS =0.7381 Sp.C.

Discharge (cfs) and Specific Conductance, Micromhos/cm (μmhos)

Day	October		November		December		January		February		March		April		May		June		July		August		September	
	cfs	μmhos	cfs	μmhos	cfs	μmhos	cfs	μmhos	cfs	μmhos	cfs	μmhos	cfs	μmhos	cfs	μmhos	cfs	μmhos	cfs	μmhos	cfs	μmhos	cfs	μmhos
1	333	825	1815	529	460	1385	2181	852	559	1498	534	1205	5166	439	427	1245	348	884	1278	680	386	671	260	850
2	278	914	1495	582	455	1375	1600	819	517	1475	516	1237	3029	555	417	1230	314	990	980	600	340	758	250	870
3	240	918	1268	604	451	1370	1222	896	512	1470	499	1253	2234	666	402	1288	326	1004	1319	680	307	840	231	890
4	218	992	1107	627	486	1323	1006	979	466	1472	476	1245	1748	722	490	1300	290	1008	1349	625	282	848	265	850
5	883	737	991	755	660	1287	869	1077	454	1480	464	1205	1450	830	1092	1068	544	1027	732	559	260	855	795	875
6	766	395	869	836	1443	1138	800	1137	500	1472	632	1268	1296	944	1002	971	1231	906	589	589	251	864	1413	800
7	408	548	796	908	3185	599	744	1195	599	1410	707	1079	1150	1044	698	1033	1017	718	499	558	249	871	823	500
8	304	795	715	1005	8771	309	706	1217	671	1382	571	974	1070	1105	804	1089	4645	612	456	595	245	925	604	600
9	260	989	687	1061	2855	431	648	1277	713	1408	490	1110	1165	1102	1055	867	4583	577	495	670	252	940	465	600
10	235	1109	615	1073	2380	596	608	1333	745	1472	433	1205	1315	1091	613	904	3060	903	415	860	245	940	370	610
11	213	1168	591	1083	8683	398	591	1335	705	1490	412	1210	1083	1058	485	1135	2431	659	350	900	231	961	330	710
12	195	1128	553	1135	4346	433	580	1372	660	1490	403	1213	975	1005	403	1241	2456	494	315	915	212	983	396	825
13	199	1181	529	1169	2505	571	571	1420	630	1466	396	1282	834	1034	365	1249	2158	523	301	969	204	985	3118	517
14	973	589	503	1209	1958	647	569	1420	601	1403	378	1350	751	1077	374	1246	1717	577	438	834	207	1041	6646	399
15	901	688	491	1248	1586	781	566	1405	579	1400	359	1343	733	1095	387	1322	4569	480	2425	596	212	1068	4646	441
16	656	653	490	1271	1309	894	563	1398	558	1400	362	1330	685	1117	379	1377	2229	750	1485	433	311	1070	4386	462
17	1568	1066	489	1304	1112	989	551	1398	552	1405	1061	799	661	1130	348	1413	1567	680	785	450	318	1117	4429	387
18	2938	667	481	1313	999	1013	544	1395	656	1305	1170	1019	634	1145	1223	1150	1637	675	587	500	273	1100	3008	343
19	7863	350	476	1328	926	1060	533	1380	718	1332	1013	1010	603	1185	1794	605	1558	740	452	625	245	900	1748	383
20	3415	417	475	1351	861	1145	513	1385	624	1416	934	1087	586	1203	934	473	1435	800	368	586	304	900	1308	438
21	2583	589	475	1384	804	1098	509	1395	628	1190	929	1115	575	1213	719	700	1120	760	343	632	1238	800	1120	493
22	3098	582	474	1400	762	1097	502	1405	686	1248	947	1140	564	1228	3148	750	879	794	1452	564	701	480	1057	595
23	3358	481	471	1400	683	1160	504	1421	678	1253	839	1207	549	1223	2798	550	768	850	6889	425	509	745	986	650
24	3098	436	470	1400	652	1277	505	1438	654	1270	740	1250	530	1220	1333	700	670	856	3683	430	1331	800	862	694
25	2594	406	470	1400	641	1345	465	1520	606	1283	766	1189	511	1220	1008	850	675	880	2325	440	998	850	734	705
26	5795	363	470	1400	632	1360	441	1540	590	1250	1815	837	498	1242	1176	920	778	890	1540	540	708	600	719	745
27	3240	394	470	1400	609	1390	432	1550	570	1280	2156	862	473	1260	1094	905	670	950	1183	466	551	600	981	723
28	2025	497	470	1394	613	1395	433	1560	547	1249	1503	860	459	1265	740	910	529	1000	956	429	439	600	3833	650
29	2007	606	469	1378	774	1254	454	1565			1270	945	444	1273	570	920	643	953	724	498	368	620	2470	565
30	2791	748	465	1376	808	1238	483	1560			5145	620	440	1263	464	900	1480	1000	573	541	315	680	1423	569
31	2324	626			1367	1028	549	1510			13662	348			396	930			460	589	283	770		
Avg.	1799	529	671	1014	1735	687	685	1230	606	1378	1341	771	1074	892	875	887	1544	688	1153	531	412	800	1656	518

DAILY FLOW AND CONTINUOUS RECORDED QUALITY DATA

PRS Station No.: 520
Location: Washita River near Durwood, Oklahoma
Water Year: 1962

Basin: Red River
Tributary to: Red River
Remarks: Records good. Occasional minor stratification.

Equations Used to Compute Constituents--
Chlorides: Cl =0.0624 Sp.C.
Sulfates: Log SO_4=1.3372 Log Sp.C.-1.6246
Dissolved Solids: DS^4=0.7381 Sp.C.

Discharge (cfs) and Specific Conductance, Micromhos/cm (μmhos)

Day	October		November		December		January		February		March		April		May		June		July		August		September	
	cfs	μmhos	cfs	μmhos	cfs	μmhos	cfs	μmhos	cfs	μmhos	cfs	μmhos	cfs	μmhos	cfs	μmhos	cfs	μmhos	cfs	μmhos	cfs	μmhos	cfs	μmhos
1	1170	669	547	1216	960	1106	770	1441	650	1515	461	1500	558	1281	1240	1055	10069	442	1525	1061	901	848	221	1220
2	1857	531	571	1220	921	1206	766	1420	628	1530	476	1515	516	1337	1170	1229	15931	391	1303	962	774	700	218	1057
3	1635	549	1499	1220	864	1337	739	1433	602	1523	541	1573	489	1398	1313	1264	13663	393	1078	1084	683	688	235	1243
4	1043	538	2798	901	834	1349	703	1443	585	1517	613	1535	468	1398	1075	1464	7098	502	960	1157	613	732	277	1268
5	848	627	2285	708	791	1348	701	1447	569	1528	559	1499	531	1400	866	1217	3539	503	858	1017	539	750	287	1180
6	763	725	3075	1057	763	1324	666	1412	516	1512	498	1497	746	1269	719	1145	4806	578	746	1024	608	746	256	916
7	663	788	4130	692	713	1357	638	1433	504	1500	471	1514	625	1108	631	1065	8084	462	670	1064	846	877	260	892
8	600	840	4005	500	1249	1007	638	1461	510	1518	441	1563	540	1251	556	1000	6273	463	612	1071	687	1079	486	939
9	576	872	2408	536	2915	578	588	1451	510	1545	442	1588	506	1320	487	1010	8925	497	566	1090	529	1340	510	1073
10	3858	453	1870	[illegible]	1685	832	533	1324	509	1540	441	1585	481	1353	435	1065	17552	439	527	1116	428	1136	402	1270
11	7564	339	1584	693	1332	1011	406	1228	505	1513	435	1530	467	1374	398	1105	12369	446	503	1083	373	1040	357	1201
12	2934	586	1394	772	1140	1084	433	1306	499	1520	430	1537	494	1400	382	1145	7949	481	495	1077	338	978	351	967
13	1731	678	1295	893	1020	1182	585	1363	486	1544	426	1578	657	1474	326	1221	6896	535	490	1138	309	948	315	1004
14	2066	799	1195	998	956	1295	793	1432	480	1543	418	1565	603	1443	348	1297	6365	531	479	1155	278	956	363	1293
15	2366	1048	1180	1073	929	1323	985	1485	476	1548	409	1548	569	1350	351	1350	5500	524	442	1144	262	948	493	1352
16	1616	668	1762	1121	1425	1063	871	1443	481	1565	413	1600	529	1171	318	1365	3845	585	1126	697	249	910	547	1309
17	1429	657	1764	960	2258	887	860	1442	489	1563	414	1600	514	1337	303	1402	2845	610	680	871	234	950	819	1231
18	1599	690	1498	1019	1733	940	826	1448	524	1523	414	1578	499	1437	291	1405	2254	592	485	1086	226	1100	761	900
19	1232	807	1363	1128	1485	965	757	1446	549	1557	414	1589	481	1450	279	1370	9530	351	413	1150	211	1187	523	879
20	1006	815	1388	1117	1303	997	591	1450	525	1549	581	1457	468	1363	271	1394	6655	425	395	1189	198	1215	520	1148
21	866	733	1590	1236	1180	1022	368	1450	491	1505	1653	825	449	1275	265	1417	4818	517	485	1211	184	1247	1934	859
22	771	755	7252	592	1091	1160	380	1336	491	1500	1029	803	451	1413	290	1455	3424	637	650	1072	174	1250	6388	483
23	691	805	7429	515	1039	1247	372	1239	499	1490	903	827	626	1403	327	1390	2534	700	485	1002	162	1250	4198	445
24	648	846	3028	554	963	1302	496	1384	522	1505	777	941	807	1208	327	1432	2213	702	412	1093	168	1236	2380	453
25	623	897	2075	686	921	1350	738	1506	502	1505	704	1259	905	1078	282	1324	1884	758	388	1205	217	1217	1513	470
26	587	959	1604	813	894	1384	1019	1476	484	1499	638	1307	868	1155	537	1327	1664	850	382	1241	181	1250	1310	533
27	562	998	1344	959	860	1419	909	1440	462	1490	588	1344	1815	825	775	892	1598	931	869	1300	153	1252	1094	638
28	551	1059	1160	975	826	1434	830	1495	453	1485	533	1355	2688	832	1209	956	1521	800	699	1059	143	1272	898	619
29	546	1124	1092	973	800	1428	823	1490			495	1370	2523	796	2779	894	1430	816	735	865	138	1299	748	697
30	545	1171	1004	1043	774	1428	769	1521			491	1371	1610	839	4502	665	1399	933	1255	1120	130	1331	663	778
31	545	1186			770	1416	700	1520			508	1259			3713	850			1099	1211	140	1311		
Avg.	1403	657	2173	782	1141	1108	686	1437	518	1523	568	1320	783	1131	863	1030	6088	491	703	1069	357	969	977	700

DAILY FLOW AND CONTINUOUS RECORDED QUALITY DATA

PMS Station No.: 508
Location: Red River near Gainesville, Texas
Water Year: 1961

Basin: Red River
Tributary to: --
Remarks: Records very good. Stratification exists at high flows; recorded conductivity is representative of stream average.

Equations Used to Compute Constituents--
Chlorides: Log Cl =1.1797 Log Sp.C.-1.2623
Sulfates: SO_4=0.1263 Sp.C.
Dissolved Solids: DS =0.6600 Sp.C.

Discharge (cfs) and Specific Conductance, Micromhos/cm (μmhos)

Day	October		November		December		January		February		March		April		May		June		July		August		September	
	cfs	μmhos	cfs	μmhos	cfs	μmhos	cfs	μmhos	cfs	μmhos	cfs	μmhos	cfs	μmhos	cfs	μmhos	cfs	μmhos	cfs	μmhos	cfs	μmhos	cfs	μmhos
1	1650	2525	4783	2810	929	5700	1306	5626	863	5953	1410	5142	12831	2145	619	4713	797	4300	3107	1544	1070	3296	485	3033
2	1285	2560	3881	2795	904	5725	1844	5257	792	5600	1376	5962	10435	1680	1435	4753	985	3021	2054	5991	831	3697	341	4593
3	857	2592	3180	3642	887	5750	1844	5257	800	5769	1345	6515	6654	1863	1663	274	947	3004	1964	5945	717	3836	385	4280
4	692	2720	2901	4299	885	5708	2853	4577	822	5546	1282	6419	4647	2300	1610	33	1203	2677	1743	4616	631	4005	454	4106
5	586	2800	2671	4383	887	5517	2912	3495	899	5320	1251	6082	3815	2850	3138	19	1242	2376	1268	3836	630	3981	472	4122
6	492	2874	2500	4358	912	5500	2501	3166	1023	5351	1074	5978	3383	3500	2442	3	2104	2574	971	3241	536	4205	623	4312
7	489	3261	2273	4481	989	5178	2218	3352	1110	5524	936	5901	3101	3150	4032	2246	14703	3665	835	3808	483	4276	1352	3407
8	583	4297	2078	4617	1102	5097	2058	3654	1301	5852	850	5763	2921	2700	3469	2749	13238	1704	726	3826	457	4200	1967	2811
9	798	4500	1924	4742	2668	3998	2068	3982	1583	6244	786	5787	2831	3850	2632	2993	14819	1364	660	3786	440	4286	1624	3421
10	686	4253	1808	4582	4880	2973	2453	3674	1913	5579	745	5800	2780	4350	1835	3356	19252	1546	589	4046	438	4550	951	3042
11	538	3673	1740	4600	6443	2719	1874	3752	1913	5412	707	5940	2921	4365	1668	3367	15206	1973	551	4337	439	4500	938	2576
12	467	3616	1680	4600	9864	1812	1740	4943	1808	5258	663	5945	2855	4100	1432	3533	7325	1978	547	4425	447	4428	1186	2244
13	404	3737	1620	4546	12167	1728	1605	4830	1550	5021	620	5900	2668	3800	1235	3032	5101	1916	617	4448	471	4473	1012	2157
14	353	3661	1566	4485	9413	1381	14561	4930	1360	5048	599	5927	2450	3661	1199	2646	6074	1934	1813	4722	482	4641	2573	2276
15	330	4065	1551	4600	6091	1312	1349	5037	1223	5455	644	4097	2333	3881	1119	3065	6151	1480	1694	7687	494	4241	9248	1305
16	7424	3109	1550	4933	3865	1422	1230	5050	1251	5411	889	2200	2201	4120	968	3293	7738	1969	2156	8311	488	4223	7738	874
17	7390	2102	1549	5025	2963	1897	1119	5044	1251	5388	956	2256	2069	4226	903	3455	7411	1579	2584	7053	517	3960	4863	718
18	9523	1634	1525	4885	2780	2778	1060	5314	1369	6216	1019	2250	1833	4200	878	3600	6341	1861	5524	5784	521	4231	3098	688
19	22773	1609	1413	4612	2471	4038	1013	5650	1113	6110	7354	4297	1454	4165	983	3639	4533	1788	4549	5257	492	4229	2083	757
20	42373	1588	1305	4595	2168	4972	982	5812	1115	6000	9200	2422	1261	4130	1767	3521	3321	1697	2856	5260	479	4075	1427	1277
21	60263	1667	1229	4641	2054	6175	945	5944	1188	5688	8600	2524	1143	4180	3328	2117	2697	1867	2121	5213	999	4318	992	2227
22	57715	1559	1148	4791	2104	6500	947	6013	1118	5688	7711	2793	1042	4231	2615	2168	2327	1988	1830	5022	1391	3510	761	1948
23	19996	1668	1073	4967	1930	6356	992	6189	994	5226	5641	2799	962	4405	1749	2146	2155	2080	3774	5248	1367	2302	621	1664
24	10995	1495	1002	5432	1740	5535	993	6400	935	5088	5148	2899	897	4556	1590	2288	2102	2137	7407	2975	878	2148	504	1586
25	10687	1494	993	5550	1623	5259	989	6550	986	5123	5233	2699	840	4600	1848	2624	1692	2836	7369	2178	747	2684	439	1716
26	15119	1617	993	5592	1515	5250	964	6339	1476	5316	4187	3351	776	4600	1918	3979	2324	3078	6719	2369	707	2999	397	1967
27	14664	1593	991	5617	1391	5250	925	5951	1620	5400	5446	3160	707	4600	1448	4904	4133	1735	4951	2861	778	4270	379	2112
28	11456	1916	974	5600	1330	5292	885	5660	1478	5065	4510	2825	663	4600	1171	5130	6818	1748	3332	2503	654	4559	382	2408
29	12875	2490	951	5692	1278	5473	839	5626			4166	2602	617	4600	1130	4650	4795	1295	2025	2705	558	4238	530	2524
30	9172	2465	946	5750	1219	5750	788	5458			6031	2805			990	4340			1470	3162	584	3797		
31	5856	2782			1213	5683	779	5589																
Avg.	10594	1790	1793	4381	2925	3126	1460	4758	1230	5514	2931	3401	3240	2902	1723	3093	5606	1982	2585	4067	667	3764	1607	1709

DAILY FLOW AND CONTINUOUS RECORDED QUALITY DATA

PHS Station No.: 508
Location: Red River near Gainesville, Texas
Water Year: 1962

Basin: Red River
Tributary to: --
Remarks: Records very good. Stratification exists at high flows; recorded conductivity is representative of stream average.

Equations Used to Compute Constituents--
Chlorides: Log Cl =1.1797 Log Sp.C.-1.2623
Sulfates: SO_4=0.1263 Sp.C.
Dissolved Solids: DS =0.6600 Sp.C.

Discharge (cfs) and Specific Conductance, Micromhos/cm (umhos)

Day	October		November		December		January		February		March		April		May		June		July		August		September	
	cfs	umhos	cfs	umhos	cfs	umhos	cfs	umhos	cfs	umhos	cfs	umhos	cfs	umhos	cfs	umhos	cfs	umhos	cfs	umhos	cfs	umhos	cfs	umhos
1	884	2326	281	3931	1023	3168	576	4684	629	5401	551	3575	524	3837	8574	2857	4912	971	7628	2904	4160	2775	559	3436
2	1285	3211	284	3772	901	3640	555	4787	893	5440	543	3588	442	4049	6089	3098	5991	989	10315	1380	3897	2846	835	2830
3	969	2897	289	3520	833	3998	541	4873	1078	5227	550	3550	380	4376	4226	3792	8175	1469	5908	1354	3143	2807	1863	2421
4	959	2400	319	3902	820	4272	534	4838	984	5035	537	3675	371	4098	2898	3938	13508	1260	3542	1266	3388	2411	1990	1945
5	808	1915	2190	3062	726	4455	528	4458	840	4227	533	3710	439	3900	2171	4516	13042	938	2397	1615	4166	3408	2763	1340
6	651	1699	6697	2689	669	4261	523	4532	767	4106	580	3607	624	3799	1759	4400	12217	942	1855	2188	5123	4858	2668	1231
7	549	1890	5528	2366	626	4152	521	4600	725	4157	557	3676	580	3774	2849	4478	8286	893	1563	2612	3939	3367	2599	1027
8	392	2259	3564	2238	693	4270	511	4743	696	4427	507	3837	531	4027	4009	2161	6135	1045	1330	2915	2963	3069	4234	965
9	408	2736	2371	2168	1809	3037	464	4424	659	4727	446	3800	579	4012	2117	1412	13223	1281	1141	3295	2435	3292	5518	894
10	1618	1235	1775	2087	3936	2096	378	1322	636	4827	393	3873	735	4347	1402	1784	29848	1383	1041	3648	2055	2906	6725	872
11	1753	1176	1454	2232	2628	1592	342	2378	643	4797	341	3524	655	4668	1037	2304	43425	1127	935	3898	1779	2836	6550	940
12	879	1696	1265	2511	1962	2030	358	3766	640	4583	316	3725	538	3508	821	2681	47563	1140	833	4110	1519	2805	6420	930
13	4160	2483	1079	2734	1717	2391	391	4664	607	4089	303	4315	411	3899	659	3263	39638	1228	778	4213	1349	2861	5503	1023
14	1069	2393	943	2966	1275	2476	503	4586	589	3838	294	4800	358	4121	553	3530	30240	1089	687	4300	1240	2939	4423	1157
15	839	1602	866	3063	1053	2953	639	4249	577	3842	293	4850	334	4348	504	3736	22654	1126	838	4053	1131	2838	3122	1279
16	1384	2254	841	3108	1101	3323	657	4143	573	3838	295	4950	297	4687	477	3900	18204	1030	1173	2709	1033	2824	1813	1442
17	1452	3660	824	3161	1561	3106	663	4400	565	3776	289	4987	292	4975	461	4224	10752	1166	842	3795	957	2937	1266	1696
18	1078	2760	927	3413	1738	2804	638	4680	577	3850	285	5063	288	5100	434	4437	8173	1140	881	3745	888	2987	995	2050
19	768	2146	1496	3300	1686	2953	572	4348	557	3786	289	5249	285	5600	410	4662	14893	1477	657	3374	844	3000	828	2185
20	575	1958	1695	2710	1779	2765	548	4620	554	3812	309	5061	284	6012	384	4700	12300	2194	635	3202	734	3000	1126	2257
21	494	1963	1565	2632	1597	3032	460	4597	625	3725	367	4647	281	6812	335	4822	24129	1752	711	3643	612	2964	4456	2282
22	424	2108	4281	1361	1339	3534	389	4332	596	3700	494	4500	281	6858	320	4988	19098	2652	1352	3294	550	2858	4040	2279
23	373	2290	6684	1653	1112	3787	381	4282	589	3535	432	4706	284	6278	308	4925	9352	3453	2803	3398	503	2908	3770	2023
24	329	2495	6434	1331	967	3822	407	4667	602	3450	412	4692	500	4367	281	4850	6323	3504	2077	2101	505	3232	5128	1884
25	302	2862	5153	1673	922	3923	497	4532	586	3613	571	4663	1034	3297	702	4902	5165	3663	1602	1726	483	3584	6219	1692
26	289	3181	5048	1738	836	4589	532	4758	589	3469	624	4797	675	3061	843	4324	4374	3620	1365	2197	437	3843	4954	1408
27	285	3350	3568	1569	738	4676	569	5012	593	3581	540	4614	2428	1658	607	2865	3827	3600	1177	2325	407	3907	4188	1375
28	284	3458	2462	1505	706	4665	536	4603	579	3519	450	4314	3439	1491	605	3069	3119	3465	1070	2235	389	4102	3256	1465
29	284	3573	1607	1747	691	4784	530	4373			404	4075	3338	2148	1512	3950	2709	3212	5663	4660	366	4152	5345	1674
30	281	3757	1208	2438	629	4815	543	4714			464	3898	7988	2179	3526	3318	2420	3235	6187	4109	348	4266	5371	1870
31	280	3919			601	4520	571	5217			581	3690			5198	1534			4256	3082	393	3431		
Avg.	739	2342	2431	2106	1247	3132	510	4437	662	4231	436	4150	973	2912	1809	3169	14790	1484	2363	2726	1669	3201	3618	1464

DAILY FLOW AND CONTINUOUS RECORDED QUALITY DATA

PHS Station No.: 507
Location: Red River near Terral, Oklahoma
Water Year: 1961

Basin: Red River
Tributary to: --
Remarks: Records poor. Stratification varies with certain flow conditions.

Equations Used to Compute Constituents--
Chlorides: Log Cl =1.1711 Log Sp.C.-1.2434
Sulfates: SO_4=0.1277 Sp.C.
Dissolved Solids: DS =0.6586 Sp.C.

Discharge (cfs) and Specific Conductance, Micromhos/cm (umhos)

Day	October		November		December		January		February		March		April		May		June		July		August		September	
	cfs	umhos	cfs	umhos	cfs	umhos	cfs	umhos	cfs	umhos	cfs	umhos	cfs	umhos	cfs	umhos	cfs	umhos	cfs	umhos	cfs	umhos	cfs	umhos
1	752	3400	2726	3395	811	5719	1473	5287	637	6600	1433	7000	11723	1800	1010	3562	522	4300	1698	3000	611	4157	302	4497
2	587	3700	2693	3883	793	5736	2182	3851	667	6500	1408	7200	8283	1950	1208	3324	451	3950	1428	2950	523	4304	302	4447
3	414	3900	2439	4105	765	5495	2458	3850	732	6400	1310	7100	5180	2400	1234	3176	586	3200	1340	2975	462	4410	299	4556
4	391	4200	2348	4230	766	5306	2481	3950	824	6200	1143	6900	3553	2873	988	3903	1090	3600	999	3636	419	4435	384	4136
5	501	4500	2136	4353	779	5200	2268	4200	905	6000	945	6600	2823	3395	1015	4148	879	3900	843	3577	402	4382	742	3060
6	692	4350	2001	4480	768	5101	1710	4500	1049	5800	891	6400	2675	3732	1826	2681	5072	2300	735	3565	391	4357	1342	2575
7	710	3626	1896	4605	874	4681	1614	4700	1358	5600	785	6200	2335	3801	2564	2585	12346	1650	652	4200	377	4462	1666	3900
8	588	3332	1824	4730	1991	4280	1476	4800	1609	5800	742	6000	2165	4219	2080	3218	13338	1300	589	4700	377	4550	1270	3700
9	462	3421	1728	4851	3952	3638	1383	5500	1774	6000	706	6000	2068	4239	1371	1968	14700	1100	557	5250	392	4679	849	3400
10	383	3278	1676	4980	3482	3096	1370	6000	1876	6100	655	6000	2408	3857	1369	1945	16435	1900	539	5200	403	4700	770	3200
11	330	3479	1664	5000	6528	3009	1374	6000	1846	6200	623	6000	2460	3282	1158	1620	14555	1950	517	5100	398	4631	641	3300
12	260	4600	1626	5000	10781	2838	1320	6000	1623	6300	579	6000	2084	3134	995	2300	5739	1950	729	4200	398	4525	582	3360
13	212	5000	1620	5000	7230	2141	1203	6200	1433	6500	545	6100	1904	3309	1070	3200	3981	2100	2072	8500	389	4357	903	2396
14	3053	4591	1620	5000	4366	2130	1110	6300	1414	6700	546	6100	1831	3502	978	3500	3544	2150	1536	8500	431	4300	6553	1024
15	9855	3215	1614	5000	2819	2500	1050	6500	1389	6850	594	6100	1766	3648	852	3700	4925	1825	2300	7300	428	4123	8883	600
16	7968	2688	1558	5019	2563	3500	985	6700	1383	7000	579	6170	1615	3563	785	3800	7851	1875	2191	6500	449	3981	6248	542
17	8816	1982	1614	5198	2371	4300	940	6900	1231	7100	692	5743	1415	3958	745	3600	6480	1900	4080	6200	433	4100	3428	569
18	5181	1554	1235	5398	2168	4700	900	7000	1248	7100	2436	3492	1195	4063	720	2850	5263	1900	5315	5800	415	4196	1838	1328
19	5868	1657	1160	5599	1926	5200	871	7000	1270	6900	8737	2529	1060	3904	1416	2050	3391	1900	2973	5400	543	3922	1201	1900
20	5710	1709	1065	5799	1883	5800	855	6900	1182	6400	9406	2474	947	3871	2457	1900	2683	1781	2143	5200	901	2765	889	1650
21	3267	1548	1025	6000	1818	6100	888	6900	1070	6200	9059	2879	876	4435	1471	2200	2088	1604	1688	5100	1241	2000	717	1600
22	5179	1420	1015	6200	1684	6100	950	6800	1040	6000	7734	2950	812	4800	1022	2500	1788	1739	2785	4750	1077	2000	611	1657
23	3204	1766	980	6452	1614	6100	847	6600	1182	6000	4874	3100	778	4741	938	2850	1609	2119	7282	2100	712	3000	534	1909
24	8730	2227	943	6551	1508	6200	832	6400	1384	6200	3640	3300	758	4711	1289	4000	1376	2450	4760	1800	653	4500	486	2060
25	7821	2386	924	6501	1339	6200	813	6300	1569	6500	3325	3500	705	4800	1483	5700	1505	2775	6622	1900	705	4600	443	2500
26	9491	2119	902	6480	1265	6200	788	6250	1467	6700	3716	3700	654	4834	1175	5200	2477	2500	5138	2400	706	4400	394	2800
27	9298	2099	894	6430	1176	6300	796	6300	1497	6800	4556	3900	626	4857	1008	4600	5716	1800	3186	2600	571	4200	357	3100
28	9260	2271	863	6351	1080	6350	765	6400	1508	6900	3026	4100	601	4894	987	3800	5707	945	1926	2800	477	4000	467	3600
29	6183	2627	830	6301	1095	6400	652	6500			2520	4300	573	4897	877	4200	3201	1392	1420	3300	401	4523	1056	3042
30	4025	2417	811	6134	1115	6174	616	6550			2757	2800	563	4838	767	4400	1951	2529	1037	3700	333	4300	860	1586
31	3355	2795			1218	5992	634	6600			7245	2250			639	4400			771	3900	309	4316		
Avg.	10103	2199	1500	4990	2339	3968	1213	5529	1292	6404	2813	3579	2214	3107	1210	3175	5042	1795	2253	4076	527	3867	1500	1588

DAILY FLOW AND CONTINUOUS RECORDED QUALITY DATA

PRS Station No.: 507
Location: Red River near Terral, Oklahoma
Water Year: 1962

Basin: Red River
Tributary to: --
Remarks: Records poor. Stratification varies with certain flow conditions.

Equations Used to Compute Constituents:
Chlorides: Log Cl =1.1711 Log Sp.C.-1.2434
Sulfates: SO_4=0.1277 Sp.C.
Dissolved Solids: DS^4=0.6586 Sp.C.

Discharge (cfs) and Specific Conductance, Micromhos/cm (μmhos)

Day	October		November		December		January		February		March		April		May		June		July		August		September	
	cfs	μmhos	cfs	μmhos	cfs	μmhos	cfs	μmhos	cfs	μmhos	cfs	μmhos	cfs	μmhos	cfs	μmhos	cfs	μmhos	cfs	μmhos	cfs	μmhos	cfs	μmhos
1	562	1900	277	4400	622	4880	457	4349	908	4699	519	3739	286	4862	4885	4471	3302	2400	8265	1604	1918	2764	313	4486
2	504	2375	402	4133	587	4598	456	4873	791	4116	508	3326	299	5174	2860	4884	5633	1630	4105	1654	1922	2894	770	2276
3	565	2261	1169	2250	550	4536	450	5060	730	4083	548	3709	315	5025	1935	4705	12456	890	2100	2293	2855	4350	1085	2024
4	608	2520	5896	1600	525	4822	448	5267	694	4405	560	3747	333	5000	1458	4600	12406	975	1348	3018	5345	4419	1136	1496
5	524	3112	7028	1950	505	5015	455	5094	667	4719	500	3832	394	5000	2069	3286	10945	1000	1090	3494	4855	4046	1154	1488
6	448	2575	4555	2200	488	4861	438	5004	633	4863	432	4245	392	4780	4659	1177	6010	1147	924	4064	2675	1864	842	2384
7	392	2600	2480	2300	488	4934	436	5017	606	4682	379	4854	749	3991	1855	1702	5562	1351	811	4523	1490	3347	1799	1907
8	329	3100	1514	2423	519	4765	414	5076	604	4637	355	5300	683	4550	1067	2548	8268	1546	730	4836	1533	3038	3498	1885
9	310	3300	1279	2628	676	4159	386	4614	613	4226	341	5294	548	5338	733	3265	19295	1699	664	4869	1228	2852	5263	1633
10	450	3900	1141	2922	885	2946	369	3896	586	3973	323	5244	480	4461	607	3736	35323	1551	610	4800	1105	2750	6790	1554
11	953	2406	1018	3244	908	2899	363	4475	567	4089	311	5238	422	4764	552	4133	45200	1119	573	4800	1055	2738	6436	1574
12	812	1687	906	3300	832	3685	368	4738	556	4042	319	5428	390	5193	454	4422	35663	1333	542	4795	982	2812	5190	1852
13	684	2600	992	3405	743	4011	513	4651	559	4163	320	5782	327	5526	412	4711	28742	1162	526	4782	921	2970	3665	2106
14	1637	1900	767	3628	702	4312	646	4519	545	4200	317	5906	370	5937	387	4852	20200	1167	498	4962	868	3050	1569	2566
15	1270	1600	1066	3696	660	4280	831	4643	536	4063	304	5819	353	6627	379	5025	16750	1133	496	5000	810	3150	973	2495
16	856	1700	1049	3600	651	4387	536	4800	535	3787	312	5537	328	7666	373	5124	10790	1178	494	4978	772	3076	833	2845
17	617	1806	1616	3200	913	3644	521	4834	536	3838	302	5388	320	7414	338	5335	6316	1446	508	4805	738	3000	712	3578
18	483	1965	1320	3100	1020	3778	491	5148	586	3912	295	5612	316	7324	339	5350	11800	2661	581	4737	626	3020	740	2864
19	409	2349	1414	2300	1115	3991	600	5286	583	3710	292	5738	301	7101	327	5388	9236	1910	620	4935	529	3365	4934	2481
20	360	2750	1364	4000	1014	4110	306	5425	535	3749	315	5366	291	6900	318	5488	17260	2051	661	5318	476	3942	4937	2400
21	321	3000	1320	4556	861	4068	236	5312	516	3800	338	5227	285	6775	300	5421	20781	3673	1995	2600	446	4099	3811	2341
22	295	3200	1333	3850	784	4538	244	5795	508	3800	450	5110	277	6194	352	5430	8594	3839	1754	1650	420	4250	3250	2358
23	276	3400	1921	3000	760	5103	246	6010	517	3800	574	4485	251	5484	1023	2807	5853	3777	1295	2238	397	4350	8023	2246
24	261	3600	3533	2500	710	4750	458	4176	536	3800	489	4686	420	4071	659	3103	4582	3724	997	2446	376	4499	4114	2313
25	255	3800	3443	2200	634	5075	523	4380	537	3750	435	4258	800	2623	498	3290	3933	3689	667	3141	360	4625	2651	2225
26	244	4000	3023	2300	625	5278	565	4866	518	3651	381	4534	1515	3416	517	6157	3210	3439	677	4160	337	4675	2356	2103
27	238	4101	1238	3244	581	4836	545	5635	496	3800	339	3958	1948	1876	1526	1560	2278	3442	2624	4950	329	4700	4625	1902
28	238	4174	848	3895	520	5125	577	5749	521	3800	307	4602	1881	2320	2856	2805	1956	3691	6462	4050	319	4700	6893	1855
29	247	4280	732	4419	488	5236	610	5447			299	4957	10803	2237	5274	900	2083	3003	4184	3243	306	4700	3648	2536
30	258	4478	636	4771	476	5381	727	5605			307	4274	8848	3704	4790	875	8968	1323	3580	3208	300	4775	2585	2642
31	264	4584			469	4868	948	5611			302	4339			3211	1350			3090	2827	286	4774		
Avg.	505	2548	1823	2693	689	4356	470	5029	590	4114	380	4689	1166	3477	1517	2775	12773	1680	1725	3184	1196	3670	3132	2063

DAILY FLOW AND CONTINUOUS RECORDED QUALITY DATA

PRS Station No.: 704
Location: Little Wichita River near Henrietta, Texas
Water Year: 1961

Basin: Red River
Tributary to: Red River
Remarks: Records fair. Occasional minor stratification.

Equations Used to Compute Constituents--
Chlorides: Log Cl =1.3066 Log Sp.C.-1.5484
Sulfates: SO_4=0.0009 Sp.C.+19
Dissolved Solids: DS^4=0.6085 Sp.C.

Discharge (cfs) and Specific Conductance, Microsohos/cm (µmhos)

Day	October		November		December		January		February		March		April		May		June		July		August		September	
	cfs	µmhos	cfs	µmhos	cfs	µmhos	cfs	µmhos	cfs	µmhos	cfs	µmhos	cfs	µmhos	cfs	µmhos	cfs	µmhos	cfs	µmhos	cfs	µmhos	cfs	µmhos
1	17	700	26	700	0	--	29	348	0	-	0	-	198	600	53	316	0	-	4	627	0	-	0	-
2	3	702	16	656	0	--	23	290	0	-	0	-	109	800	35	327	0	-	2	630	0	-	0	-
3	.2	720	10	566	0	--	21	309	0	-	0	-	63	1000	25	303	0	-	2	661	0	-	0	-
4	0	--	8	525	0	--	16	373	0	-	0	-	32	786	10	321	0	-	1	650	0	-	0	-
5	.1	719	6	520	0	--	11	474	.4	530	0	-	19	675	5	416	0	-	1	650	0	-	5	275
6	.3	676	4	513	2	--	8	500	2	440	0	-	10	667	7	557	0	-	.7	650	0	-	104	716
7	.3	630	4	510	15	330	5	501	150	700	0	-	7	736	22	653	0	-	2	666	0	-	358	1003
8	.2	630	3	515	146	250	3	519	145	750	0	-	16	761	26	601	4	5020	2	677	0	-	214	668
9	.3	629	2	560	300	518	34	659	133	760	0	-	3	772	11	355	21	6200	1	695	0	-	58	496
10	.1	626	2	586	776	422	95	289	142	1106	0	-	.2	777	4	513	24	7619	2	713	0	-	24	511
11	.1	638	2	630	478	774	61	650	94	992	0	-	0	-	2	685	25	3130	126	1991	0	-	11	530
12	0	--	1	620	767	360	35	752	51	943	0	-	0	-	2	868	15	6760	93	2230	0	-	9	535
13	0	--	1	595	631	600	21	725	30	857	0	-	0	-	.5	952	11	3990	37	1479	0	-	277	330
14	0	--	1	588	130	375	11	677	20	794	0	-	0	-	.3	1078	15	2563	15	677	0	-	662	550
15	962	75	1	573	66	600	6	605	13	728	0	-	0	-	.1	1105	14	2560	9	596	0	-	789	610
16	618	100	.7	560	41	610	5	661	8	704	.1	752	0	-	0	-	108	1457	6	598	0	-	228	380
17	212	150	.3	530	26	605	-	691	5	700	10	674	0	-	0	-	449	806	30	930	0	-	23	370
18	363	160	.1	531	11	600	4	675	4	693	68	574	0	-	0	-	183	549	62	1013	0	-	8	370
19	712	550	0	--	6	600	3	603	3	683	355	1330	0	-	0	-	28	653	21	1221	50	360	8	370
20	896	425	0	--	4	600	2	576	2	680	296	777	0	-	0	-	15	520	8	1323	35	350	8	370
21	378	533	0	--	3	600	1	550	1	679	108	743	0	-	0	-	9	590	3	1320	14	320	7	375
22	80	635	0	--	3	600	.8	550	.7	682	47	702	0	-	0	-	7	650	2	1320	3	285	5	375
23	37	652	0	--	3	600	.7	546	.7	686	25	671	0	-	0	-	5	700	1	1376	.8	320	3	380
24	21	660	0	--	3	600	.5	540	.7	586	17	659	0	-	0	-	4	800	.5	1524	.2	402	3	390
25	152	322	0	--	2	600	.4	549	.4	566	17	622	0	-	0	-	401	434	2	1529	0	-	2	390
26	336	362	0	--	2	600	.3	550	.2	670	16	489	0	-	2	1250	1303	192	9	1553	0	-	.6	395
27	491	361	0	--	2	600	.3	558	.1	671	17	457	0	-	3	1500	960	236	7	1322	0	-	.3	395
28	221	518	0	--	1	600	.3	560	.1	678	17	542	0	-	1	2800	124	526	4	1215	0	-	.4	395
29	88	610	0	--	1	600	.3	553			20	590	0	-	.4	3300	32	587	2	1160	0	-	.2	400
30	52	661	0	--	.7	610	.3	554			56	395	0	-	.1	3600	12	613	.8	1092	0	-	0	-
31	36	697			10	359	.1	560			124	342			.1	4300			.1	1122	0	-		
Avg.	183	327	3	610	88	365	13	495	29	673	38	839	15	643	7	439	126	496	15	1564	3	350	96	500

DAILY FLOW AND CONTINUOUS RECORDED QUALITY DATA

PRS Station No.: 704
Location: Little Wichita River near Henrietta, Texas
Water Year: 1962

Basin: Red River
Tributary to: Red River
Remarks: Records fair. Occasional minor stratification.

Equations Used to Compute Constituents--
Chlorides: Log Cl =1.3066 Log Sp.C.-1.5484
Sulfates: SO_4=0.0009 Sp.C.+19
Dissolved Solids: DS =0.6085 Sp.C.

Discharge (cfs) and Specific Conductance, Micromhos/cm (µmhos)

Day	October		November		December		January		February		March		April		May		June		July		August		September	
	cfs	µmhos	cfs	µmhos	cfs	µmhos	cfs	µmhos	cfs	µmhos	cfs	µmhos	cfs	µmhos	cfs	µmhos	cfs	µmhos	cfs	µmhos	cfs	µmhos	cfs	µmhos
1	0	-	0	-	4	450	0	-	0	-	0	-	0	-	20	1146	163	493	997	455	15	603	28	415
2	30	350	72	313	2	450	0	-	0	-	0	-	0	-	9	1130	640	476	414	580	12	529	273	990
3	11	300	127	290	1	450	0	-	0	-	0	-	0	-	4	1177	826	531	100	622	5	590	261	747
4	2	280	147	1902	.7	450	0	-	0	-	0	-	.3	1799	2	1219	351	510	49	670	19	564	272	633
5	48	320	84	1989	.5	456	0	-	0	-	0	-	27	1138	.8	1232	96	533	21	635	11	555	129	695
6	27	380	36	4061	.3	453	0	-	0	-	0	-	73	901	.3	1250	151	446	10	595	3	550	487	517
7	12	520	16	1287	.5	458	0	-	0	-	0	-	86	2012	.1	1250	318	460	6	635	1	565	1148	395
8	7	650	7	1392	9	419	0	-	0	-	0	-	37	1851	0	-	478	706	3	630	.7	587	1806	278
9	96	740	4	1710	50	298	0	-	0	-	0	-	18	1307	0	-	802	389	1	622	.3	664	2050	267
10	146	307	2	2429	159	255	0	-	0	-	0	-	12	1116	0	-	1128	353	.1	663	.1	728	2100	258
11	20	251	2	2631	121	238	0	-	0	-	0	-	8	1615	0	-	1603	342	0	-	0	-	2096	253
12	6	219	1	2788	70	440	0	-	0	-	0	-	5	2112	0	-	1805	330	0	-	0	-	1652	262
13	13	243	1	2831	20	1765	0	-	0	-	0	-	3	2260	0	-	1876	334	0	-	0	-	177	310
14	7	291	1	2904	11	704	0	-	0	-	0	-	2	2296	0	-	1540	345	0	-	0	-	48	378
15	2	339	55	1024	8	551	0	-	0	-	0	-	1	2315	0	-	214	350	0	-	0	-	28	400
16	1	388	43	267	13	962	0	-	0	-	0	-	.7	2345	0	-	77	394	12	729	0	-	19	371
17	1	425	77	382	19	903	0	-	0	-	0	-	.5	2360	0	-	60	450	11	752	0	-	34	370
18	1	466	66	497	30	565	0	-	0	-	0	-	.4	2319	0	-	28	462	6	636	0	-	505	199
19	.8	455	46	562	29	555	0	-	0	-	0	-	.2	2208	0	-	65	453	5	421	0	-	481	368
20	.3	466	25	1337	20	684	0	-	0	-	0	-	0	-	0	-	115	341	5	303	0	-	109	465
21	.1	457	12	2346	13	856	0	-	0	-	0	-	0	-	0	-	73	401	30	390	0	-	42	616
22	0	-	199	500	7	734	0	-	0	-	0	-	0	-	0	-	35	445	52	540	0	-	21	889
23	0	-	468	210	3	716	0	-	0	-	0	-	.4	2130	0	-	18	501	82	1200	0	-	13	917
24	0	-	828	372	2	797	0	-	0	-	0	-	169	280	0	-	10	657	40	330	0	-	7	878
25	0	-	741	432	.8	882	0	-	0	-	0	-	101	242	0	-	5	835	21	410	0	-	31	697
26	0	-	107	687	.5	929	0	-	0	-	0	-	56	255	0	-	2	859	11	500	0	-	154	427
27	0	-	36	514	.1	1085	0	-	0	-	0	-	178	240	66	595	1	826	94	280	0	-	329	582
28	0	-	19	485	.1	1367	0	-	0	-	2	2133	287	304	569	811	.4	831	248	1100	0	-	142	549
29	0	-	10	485	.1	1722	0	-			2	2214	140	1138	771	620	199	546	87	650	0	-	93	642
30	0	-	6	480	.1	1975	0	-			.4	2197	44	1203	407	851	918	175	58	450	0	-	26	633
31	0	-			0	-	0	-			.2	2119			275	683					0	-		
Avg.	14	419	109	563	19	451	0	-	0	-	.1	2170	42	676	69	732	453	380	78	577	2	567	est.	338

DAILY FLOW AND CONTINUOUS RECORDED QUALITY DATA

PMS Station No.: 700
Location: Beaver Creek near Waurika, Oklahoma
Water Year: 1961

Basin: Red River
Tributary to: Red River
Remarks: Records very good.
Stratification nil.

Equations Used to Compute Constituents:
Chlorides: Cl =0.1077 Sp.C.
Sulfates: SO_4=0.1771 Sp.C.
Dissolved Solids: DS =0.6932 Sp.C.

Discharge (cfs) and Specific Conductance, Micromhos/cm (µmhos)

Day	October		November		December		January		February		March		April		May		June		July		August		September	
	cfs	µmhos	cfs	µmhos	cfs	µmhos	cfs	µmhos	cfs	µmhos	cfs	µmhos	cfs	µmhos	cfs	µmhos	cfs	µmhos	cfs	µmhos	cfs	µmhos	cfs	µmhos
1	3	797	11	641	12	1259	118	1126	29	1497	26	1384	943	445	36	1705								
2	2	939	11	658	12	1250	119	966	32	1527	25	1400	221	505	31	1625								
3	1	977	10	700	12	1250	70	819	30	1538	23	1400	129	625	31	1649								
4	2	833	10	760	12	1250	52	757	27	1391	23	1400	98	716	42	1636								
5	10	512	10	753	21	1237	42	818	27	1323	24	1400	81	1033	102	1768								
6	14	401	10	777	41	1397	38	936	35	1310	25	1426	69	1503	68	1271								
7	10	269	9	827	90	626	35	1053	57	1306	24	1450	64	1611	43	985								
8	2	321	9	851	326	474	33	1188	63	1313	22	1450	62	1654	34	1069								
9	1	355	9	872	108	710	32	1296	62	1258	22	1446	110	1697	28	1279								
10	1	402	9	917	179	607	30	1350	58	1232	22	1439	202	1240	26	1434								
11	1	420	9	969	586	368	28	1358	54	1266	21	1423	106	870	23	1496								
12	4	436	9	1006	271	985	29	1394	49	1259	21	1410	75	1070	21	1603								
13	6	451	9	1038	115	503	28	1412	39	1211	22	1420	61	1336	20	1619								
14	10	483	9	1076	69	588	29	1406	37	1226	22	1434	55	1498	22	1660								
15	209	490	10	1102	56	865	28	1410	34	1266	22	1425	52	1565	22	1749								
16	32	361	10	1162	44	786	28	1432	32	1296	22	1442	68	1614	19	1881								
17	18	353	10	1172	37	893	28	1430	32	1344	116	978	66	1662	34	1820								
18	63	269	11	1199	33	1011	28	1459	30	1368	306	1018	45	1660	941	480								
19	780	223	11	1200	31	1092	26	1455	30	1370	239	643	45	1746	1027	319								
20	868	198	10	1200	29	1160	26	1446	28	1402	109	827	45	1708	203	479								
21	136	222	11	1197	27	1181	25	1421	27	1438	70	838	44	1700	105	655								
22	63	287	11	1201	27	1226	24	1406	31	1432	56	1067	43	1700	77	884								
23	31	363	11	1217	26	1269	25	1400	34	1431	47	1281	41	1693	68	1103								
24	28	400	11	1221	26	1315	26	1400	32	1509	40	1326	39	1690	52	1208								
25	235	182	11	1223	27	1341	25	1400	31	1518	126	666	37	1695	47	1386								
26	356	207	10	1225	28	1356	19	1400	29	1461	366	555	36	1711	43	1447								
27	12	620	11	1231	28	1364	14	1435	28	1407	124	1008	31	1716	50	1381								
28	31	752	12	1270	26	1381	17	1449	27	1371	68	1313	28	1709	50	1437								
29	19	650	12	1289	27	1388	19	1446			50	1222	28	1700	39	1495								
30	14	599	12	1286	31	1391	25	1430			406	572	27	1736	36	1461								
31	12	633			49	1273	25	1480			1560	453			33	1350								
Avg	16	2021	9	1050	77	661	35	1205	32	1349	130	716	97	1002	111	743								

DAILY FLOW AND CONTINUOUS RECORDED QUALITY DATA

PRS Station No.: 503
Location: Wichita River at Wichita Falls, Texas
Water Year: 1961

Basin: Red River
Tributary to: Red River
Remarks: Records fair. Stratification oil.

Equations Used to Compute Constituents--
Chlorides: Log Cl =1.0961 Log Sp.C.-0.9387
Sulfates: SO_4 =0.0981 Sp.C.
Dissolved Solids: DS =0.6530 Sp.C.

Discharge (cfs) and Specific Conductance, Micromhos/cm (μmhos)

Day	October		November		December		January		February		March		April		May		June		July		August		September	
	cfs	μmhos	cfs	μmhos	cfs	μmhos	cfs	μmhos	cfs	μmhos	cfs	μmhos	cfs	μmhos	cfs	μmhos	cfs	μmhos	cfs	μmhos	cfs	μmhos	cfs	μmhos
1	92	3891	408	3848	96	4818	217	4758	50	6088	38	6500	2368	1100	266	2956	176	4662	350	3700	153	3761	178	4600
2	86	4308	477	3749	99	5582	290	3740	48	5950	36	6463	1622	1500	187	4162	181	6598	348	4300	159	3911	175	4600
3	76	4496	550	3649	97	5548	118	6919	45	5865	36	6269	1330	1800	157	4121	251	3953	347	4800	176	4285	182	4520
4	116	3899	550	3550	101	4650	80	6481	45	6611	36	6100	1066	2100	592	2199	315	3819	163	4660	188	4307	498	3904
5	106	3863	563	3650	116	4997	70	5000	53	6500	36	6118	874	2800	841	1820	462	3657	160	4524	177	4317	654	3598
6	87	4497	565	3250	111	4535	64	5600	109	7008	32	6629	834	3000	1179	2362	456	3578	137	4593	182	4320	246	3551
7	72	4867	565	3250	160	4301	62	5600	115	8798	32	6798	796	3008	416	1777	492	3543	137	4615	238	4298	174	3639
8	55	4693	565	3291	958	3623	60	5600	109	8572	29	6607	802	3020	710	1612	606	3537	134	4615	216	4422	326	3685
9	66	4583	565	3300	571	2028	63	5800	111	7690	30	6500	804	3050	561	1838	685	3863	165	4600	231	4120	197	1515
10	63	5100	563	3300	321	1945	60	6000	101	6796	38	6559	798	3100	570	2085	676	4445	289	4371	229	4055	103	2145
11	77	5200	556	3300	1577	1550	55	6200	81	6246	50	6651	784	3122	668	2137	609	4023	239	4206	221	4000	82	2092
12	60	5000	574	3300	1138	1151	51	6400	65	6289	229	9096	722	3206	582	2396	568	3600	195	3975	226	4000	168	2884
13	38	5050	580	3300	598	1478	50	6500	55	6686	152	1976	782	3283	457	3115	533	3600	156	3808	240	3871	892	2091
14	38	5150	577	3500	986	2339	55	6500	48	6612	78	2215	760	3054	475	3283	471	3633	144	3957	267	3998	903	1618
15	73	4500	567	3600	163	3921	61	6400	44	6481	60	2221	652	3200	676	3436	825	3369	126	4171	273	4041	220	1680
16	623	2400	568	3800	126	3510	56	6400	40	6359	59	3615	383	3600	486	3461	996	3813	446	3751	256	4139	132	2400
17	270	1600	717	4000	113	3896	50	6400	39	6250	1259	1345	238	3300	408	3637	291	2852	160	4011	240	4316	99	3600
18	2250	1000	169	4200	1055	4077	46	6500	39	6338	4400	560	192	3691	276	3535	267	3250	135	4384	226	4235	89	4100
19	5339	685	142	4400	98	4570	44	6500	38	6594	7098	1018	155	3963	196	3600	260	3600	122	4467	231	4200	85	4618
20	5799	680	133	4600	93	4867	42	6600	39	6806	9076	1768	144	4100	171	3750	289	3315	116	4626	235	4244	82	4762
21	6379	1800	123	4800	94	5063	42	6600	44	6793	1683	2031	162	4250	168	3900	268	2500	132	4852	293	4381	78	5296
22	1651	1850	116	4797	157	5258	42	6700	101	7186	1061	2096	165	4500	170	4100	152	2200	990	2758	206	4409	77	5600
23	1066	1650	109	4733	153	3891	42	6800	100	8211	866	2150	153	4600	193	4185	132	2600	3126	912	192	4400	73	5584
24	931	1250	110	4797	142	2896	42	6800	72	8161	836	2300	132	4800	211	3278	126	3000	3903	578	163	4481	71	5300
25	1183	1100	108	5030	92	2927	40	6850	57	7921	878	2500	125	4830	302	3598	1306	1401	2126	1015	165	4550	67	5830
26	1673	1173	100	5038	76	2443	31	6900	48	6360	909	2700	122	4881	351	3508	1301	1201	305	3172	161	4550	66	6000
27	900	1250	96	5000	70	4185	31	7000	42	6260	892	2856	126	5021	352	3631	356	1900	238	3749	167	4550	66	5753
28	369	1500	97	5283	70	4938	31	7100	39	6475	836	3050	123	4950	263	3633	1855	2050	186	2271	165	4733	64	5952
29	274	1850	99	5463	70	5101	40	7200			776	3100	123	4800	193	3790	164	2600	165	2781	154	4700	64	6000
30	256	2260	96	5181	73	5375	49	7200			1070	2000	123	4850	186	3845	156	3250	169	3169	167	4682	64	5894
31	233	3449			90	5295	51	7000			2053	1300			181	4217			151	3660	181	4636		
Avg.	898	3209	331	3657	236	2720	63	5760	63	7169	987	1706	586	7665	394	3012	450	3001	477	1818	204	4265	205	3213

DAILY [illegible] CONTINUOUS RECORDED QUALITY DATA

PHS Station No.: 503
Location: Wichita River at Wichita Falls, Texas
Water Year: 1962

Basin: Red River
Tributary to: Red River
Remarks: Records fair. Stratification nil.

Equations Used to Compute Constituents--
Chlorides: Log Cl =1.0961 Log Sp.C.-0.9387
Sulfates: SO_4 =0.0981 Sp.C.
Dissolved Solids: DS =0.6130 Sp.C.

Discharge (cfs) and Specific Conductance, Micromhos/cm (µmhos)

Day	October		November		December		January		February		March		April		May		June		July		August		September	
	cfs	µmhos	cfs	µmhos	cfs	µmhos	cfs	µmhos	cfs	µmhos	cfs	µmhos	cfs	µmhos	cfs	µmhos	cfs	µmhos	cfs	µmhos	cfs	µmhos	cfs	µmhos
1	65	5633	86	6703	64	5726	60	6026	55	5465	60	4979	117	5101	258	6262	495	2765	155	5400	93	3500	152	4800
2	198	5179	109	5936	61	5981	46	6461	56	5366	70	5176	168	6287	157	6371	955	1581	115	4400	76	4203	199	5153
3	161	6609	336	5700	62	6001	48	6367	56	5319	72	5200	169	9676	115	6565	332	3731	102	4330	167	4780	152	5078
4	123	6566	196	5800	61	6060	68	6307	67	5156	58	5027	116	10576	93	6247	153	4237	80	6353	157	3500	111	4586
5	86	5733	102	6200	60	6038	70	6084	63	5392	56	5567	176	6724	76	6812	205	3111	76	6656	86	3215	112	4863
6	72	6636	89	6700	37	6000	56	5366	62	5400	56	5830	159	6711	70	6937	593	1932	76	1978	67	3696	577	2166
7	67	5548	82	6350	39	5825	50	5121	63	5550	58	5809	111	6803	66	5266	571	2682	78	5300	66	3955	1048	1368
8	66	5396	71	6377	69	5711	65	5806	63	5376	66	5806	79	6285	60	5509	1635	1066	73	5275	66	4646	2573	956
9	62	5378	60	6736	63	5536	65	6022	39	5586	76	5673	66	5526	63	5868	1886	1183	79	5129	118	4958	1962	2017
10	97	5700	58	5016	60	5530	65	6208	37	5800	78	5206	58	6526	72	5646	1688	1016	161	5127	123	4717	1673	5173
11	95	5317	58	5283	52	5820	61	6226	37	5714	67	4805	51	6017	72	5576	667	1559	108	5169	111	4800	919	2896
12	76	6753	62	5633	50	6051	61	6012	39	5695	60	5136	48	5787	89	5671	786	1581	103	4923	106	4800	569	2795
13	67	6511	65	5667	67	5931	66	5606	39	6210	76	5666	51	6056	97	5551	688	1632	116	5088	105	4876	280	3556
14	63	6286	63	5715	65	5907	65	5653	38	6692	71	6632	56	6375	93	5518	696	1257	109	5027	116	4978	198	4156
15	61	6289	83	6329	65	5557	57	5556	39	6661	58	5358	59	6126	90	5663	290	1369	131	4606	116	5015	156	4200
16	66	5016	127	3792	69	5711	57	5967	65	6616	60	6866	60	6747	90	5375	150	2064	167	4559	122	5000	156	4161
17	69	5300	153	6386	68	5631	55	5766	39	6116	57	6832	62	6387	96	5725	60	2670	158	4500	137	5012	638	1666
18	68	5273	90	5238	85	6376	56	5381	33	5876	66	5053	60	5952	82	5225	86	3130	155	4600	163	4837	377	2998
19	65	5157	65	3896	62	5712	51	5669	38	5655	73	5438	55	5601	71	5186	677	2000	162	4800	167	4800	352	3648
20	61	5187	55	6005	55	5906	50	5669	67	6312	[illegible]	5130	56	5688	63	5187	709	1737	152	4753	148	4854	281	2806
21	63	5261	52	6547	51	6000	49	5621	66	5974	[illegible]	4956	55	5865	70	5449	243	2252	183	4400	150	4838	[illegible]	2319
22	66	5297	112	5316	69	6019	66	5356	73	[illegible]	78	5787	77	6252	72	5450	135	2724	196	4366	150	4288	85	3491
23	66	5350	315	3671	68	6000	50	5635	66	4980	85	5437	78	5566	87	5585	111	3437	132	4295	152	5012	76	3431
24	66	5238	168	5472	68	6050	62	5512	39	4800	70	5460	176	6531	93	5190	101	3885	105	4566	149	5081	73	5113
25	66	5150	97	3298	65	6088	60	5667	65	5057	65	5425	191	5105	123	4963	96	4467	107	4757	157	4875	93	4763
26	73	5441	73	5676	66	6311	58	5400	51	5554	72	5501	109	5000	129	4750	91	4950	932	1681	151	4773	118	4916
27	64	5680	63	6172	63	6672	56	5000	58	5586	76	5221	248	3821	136	4600	89	5000	1438	1732	155	4688	138	3871
28	69	6969	56	6360	63	6696	56	5488	53	5106	70	5775	710	3644	146	4797	85	5050	335	2001	151	4848	192	3825
29	94	6763	67	6696	68	6567	53	5512			67	5597	721	2099	197	4936	370	2600	272	2711	127	4900	350	3075
30	99	6962	65	5139	59	6667	53	5601			76	5762	605	3717	160	5205	616	2006	286	3139	118	4900	215	1836
31	101	6995			59	6150	55	5716			116	5679			166	4635			166	2671	123	5052		
Avg	82	5150	99	6195	69	5980	51	5726	50	5625	73	5610	150	6628	105	4999	488	1877	209	3167	126	4662	448	2427

DAILY FLOW AND CONTINUOUS RECORDED QUALITY DATA

PHS Station No.: 751
Location: Beaver Creek near Electra, Texas
Water Year: 1961

Basin: Red River
Tributary to: Wichita River
Remarks: Records poor. Stratification nil.

Equations Used to Compute Constituents--
Chlorides: Log Cl =1.2167 Log Sp.C.-1.3267
Sulfates: SO_4 =0.0076 Sp.C.+25
Dissolved Solids: DS =0.6060 Sp.C.

Discharge (cfs) and Specific Conductance, Micromhos/cm (μmhos)

Day	October		November		December		January		February		March		April		May		June		July		August		September	
	cfs	μmhos	cfs	μmhos	cfs	μmhos	cfs	μmhos	cfs	μmhos	cfs	μmhos	cfs	μmhos	cfs	μmhos	cfs	μmhos	cfs	μmhos	cfs	μmhos	cfs	μmhos
1	4	9000	4	4000	4	10500	70	2843	2	13000	8	15593	535	989	2	10000	3	4072	2	3619	4	2155	10	3550
2	3	10000	3	4200	2	11000	34	2194	2	13000	2	16096	361	2250	2	10200	3	4418	2	3675	3	2301	10	3670
3	3	11000	3	4421	11	8000	10	3112	1	13000	.7	15684	194	2679	2	10412	3	4752	2	3715	3	2415	22	5138
4	12	8000	2	4574	24	6000	6	4487	3	10000	.6	16976	33	2682	292	4497	8	5814	1	3782	4	2518	241	3763
5	30	3727	2	4575	14	6000	5	6221	54	5000	.5	16802	18	2671	830	3318	10	17388	.9	3918	15	1860	89	3081
6	16	2803	2	4674	7	8000	3	7806	26	4500	.4	17067	14	3148	315	2009	30	22164	.7	4367	27	2222	88	4085
7	7	2611	2	4700	549	1000	4	11186	21	6000	.4	17400	12	4047	595	1293	66	6745	.7	4738	25	4670	280	977
8	5	2708	1	4725	369	1200	3	16029	28	7500	.4	18225	11	4653	386	1046	130	9995	.6	4850	24	8490	123	488
9	4	2840	1	4991	94	1840	2	10764	18	5540	.4	18750	10	5838	343	980	177	6118	42	2601	16	6224	12	549
10	3	3005	1	5510	738	2107	2	10280	12	6905	65	9152	11	5205	342	700	105	2361	39	2586	10	3984	4	738
11	3	3365	.9	5949	724	2047	2	10799	8	7154	275	2098	9	4779	187	674	33	3154	16	2529	10	3374	4	969
12	4	3833	1	6028	137	1745	2	11825	5	7343	107	466	8	6362	31	846	17	3567	7	3418	14	2984	209	1649
13	5	4478	2	6022	38	1270	2	12375	4	8197	13	794	7	6602	16	1222	9	3582	4	5977	10	2827	516	1002
14	8	7581	2	5859	17	1508	2	13142	3	9105	5	1241	6	6319	11	1713	446	2055	3	6833	14	10141	51	3209
15	17	4820	7	9279	11	2208	2	13739	2	9970	3	2180	6	6536	8	2069	724	1027	3	6829	15	6233	15	2635
16	25	3887	5	10982	8	2712	2	13150	2	10829	927	849	5	5792	7	2325	59	982	7	8745	11	3684	7	3075
17	26	2168	2	9566	6	3177	2	12127	2	10156	10062	360	5	5022	6	2828	25	1440	5	8956	10	3921	4	3373
18	3943	662	1	7385	5	3680	2	10714	1	13046	3788	650	4	4715	5	3301	45	1524	3	7850	10	4091	3	3642
19	4398	300	.9	6589	4	4420	2	10177	.9	14684	588	700	4	5696	5	11026	217	1315	3	7294	11	4204	2	3853
20	1170	300	.7	5765	33	1692	1	10897	8	13453	471	800	4	8075	32	5165	145	468	2	7539	10	4301	2	4063
21	678	300	.8	5800	92	2055	1	10635	59	8132	254	1000	4	8100	13	3302	22	549	260	1481	10	4747	2	4472
22	721	300	.9	5910	89	521	.9	10795	26	9558	47	2500	4	8200	7	2442	8	800	3647	723	11	4777	2	4547
23	756	300	.7	6789	66	515	1	11819	13	9173	25	3181	4	8400	8	1915	4	1000	3983	468	10	4393	2	4764
24	713	350	.5	7144	13	895	1	11259	7	11015	18	3767	3	8600	7	1989	3	1200	939	530	11	4113	1	5162
25	661	550	.5	7000	6	1597	1	12061	5	12232	56	6038	3	8800	5	2178	423	1486	256	533	10	4044	1	5145
26	390	1400	5	4034	4	2228	1	12719	4	13261	84	5210	2	9000	4	2434	117	943	32	925	9	3974	1	5046
27	40	1650	17	2765	3	2645	1	13345	2	14288	33	4036	2	9200	4	2706	25	4988	17	1242	10	3862	1	5100
28	17	2400	16	3610	3	3291	1	12724	3	14613	16	5819	2	9400	3	2293	10	4103	12	1479	10	3801	1	5100
29	10	3000	10	6063	2	5782	2	12704			11	7047	2	9600	3	2224	5	3734	9	1685	10	3676	1	5000
30	7	3500	5	10500	2	9338	2	12003			13	4572	2	9800	3	1747	3	3620	7	1876	10	3605	36	3500
31	5	3800			44	5736	2	12231			36	1618			3	3141			5	2021	10	3641		
Avg.	441	751	3	5457	101	1828	6	5204	11	7637	591	764	43	2217	112	3826	96	2553	300	662	12	4434	58	1944

DAILY FLOW AND CONTINUOUS RECORDED QUALITY DATA

PHS Station No.: 751
Location: Beaver Creek near Electra, Texas
Water Year: 1962

Basin: Red River
Tributary to: Wichita River
Remarks: Records poor.
Stratification nil.

Equations Used to Compute Constituents--
Chlorides: Log Cl =1.2167 Log Sp.C.-1.3267
Sulfates: SO_4=0.0076 Sp. C. + 25
Dissolved Solids: DS=0.6060 Sp. C.

Discharge (cfs) and Specific Conductance, Micromhos/cm (μmhos)

Day	October		November		December		January		February		March		April		May		June		July		August		September	
	cfs	μmhos	cfs	μmhos	cfs	μmhos	cfs	μmhos	cfs	μmhos	cfs	μmhos	cfs	μmhos	cfs	μmhos	cfs	μmhos	cfs	μmhos	cfs	μmhos	cfs	μmhos
1	133	1000	3	3886	5	4486	3	7499	2	10200	1	11026	101	11782	8	3578	150	6000	1	6567	5	1953	13	2805
2	67	3500	188	6691	4	4219	3	7469	2	10188	1	10850	54	1414	3	3773	101	4800	.9	6450	179	620	36	2399
3	45	1500	98	2131	4	4099	3	7604	2	10088	1	10673	11	1214	2	3930	40	3500	.4	6083	88	753	13	2514
4	14	1218	17	1776	4	3962	3	8047	2	10075	1	10865	6	1357	.7	4163	18	3000	.1	6013	25	3442	9	2238
5	9	1240	8	1940	4	3623	3	8019	2	10100	1	11172	45	6593	1	3719	17	6108	.1	5861	12	2247	7	2916
6	7	1200	5	2127	4	3289	3	8000	1	10112	.9	11125	37	2345	5	3357	304	2796	.3	5647	10	3099	436	1659
7	4	1351	4	2375	4	3142	3	8024	1	10113	.9	10925	14	1686	2	2764	137	1962	.1	5557	9	2933	786	901
8	3	1795	4	2534	6	5012	3	8224	1	10000	.9	10725	6	2061	1	2715	656	1341	.1	5463	6	2343	896	753
9	13	5720	3	2600	8	10741	3	8119	1	10000	.9	10500	4	1756	.4	2746	384	1213	.1	5450	5	2920	400	526
10	10	5573	8	2516	8	6397	2	8751	1	10000	1	10217	3	1692	.2	2808	214	1103	5	4861	4	3525	349	478
11	5	5188	20	2355	6	5731	2	9044	1	10089	1	10099	2	1795	0	-	289	1599	7	3796	4	3080	240	488
12	4	5087	17	2778	4	5625	2	9157	1	10188	1	11617	2	1960	0	-	561	1000	5	4799	4	2444	29	534
13	4	4892	10	3041	4	6067	2	8820	1	10225	1	11704	6	1591	0	-	484	558	2	5000	3	2084	8	550
14	3	4614	8	4112	3	6231	3	8301	1	10531	1	11487	5	1202	0	-	262	525	3	4427	3	1861	4	570
15	3	4402	90	5062	3	6414	2	7935	1	10512	1	11314	3	1424	0	-	38	648	12	7178	4	1707	2	631
16	2	3774	91	2557	38	7851	2	9599	1	10500	1	11127	2	1711	0	-	10	822	6	5503	4	1779	19	780
17	2	3368	22	4399	13	4444	2	9474	1	10512	.8	11088	2	1957	0	-	4	877	6	5877	5	2074	95	3758
18	1	3818	10	2465	9	3843	2	9131	1	10600	.7	11001	2	2174	0	-	53	2251	33	3907	4	2015	158	2059
19	1	4132	7	2070	5	4762	2	8819	1	10772	.7	10900	2	2299	.8	5709	268	1648	11	2841	4	1945	255	834
20	.9	4183	7	2164	3	5141	2	8800	1	10503	3	15697	2	2412	5	4101	61	548	36	2634	4	1905	29	794
21	.7	3820	7	2212	3	5462	2	8766	1	10300	4	23493	1	2523	3	2500	17	1043	6	1012	4	1849	6	672
22	.6	4518	82	3376	3	6236	2	8733	1	10423	2	23208	1	2673	38	4173	6	1045	5	988	6	1864	3	565
23	2	4643	53	2092	3	6344	2	9102	1	10477	2	15597	1	2841	19	6609	5	771	2	1041	5	1900	2	616
24	2	3902	17	2130	3	6280	2	9063	1	10180	2	13404	16	10945	9	9328	5	700	2	5921	4	1900	1	684
25	2	3727	10	2877	3	6294	2	8836	1	10460	1	11804	17	5874	8	9806	6	786	2	9760	3	1831	48	3115
26	2	3823	7	3640	3	6499	2	8763	1	10892	1	11676	14	5717	15	11300	7	896	210	1813	3	1757	45	1718
27	2	3546	7	4115	3	6952	3	8808	1	10750	.9	11467	315	3722	12	11718	7	1158	97	1436	3	1755	191	2556
28	2	3474	6	4415	3	7200	3	8574	1	10751	.8	11152	416	2131	5	8658	10	2531	20	3296	3	1823	269	466
29	2	3684	6	4795	3	7228	3	9244			.7	11024	62	2984	31	7919	4	5893	270	2160	3	2074	200	400
30	3	3845	6	4865	3	7366	2	9974			.9	11128	22	3300	46	7600	2	4611	74	2247	5	2200	26	400
31	3	3787			3	7475	2	10097			29	12931			11	7200			15	1900	5	2731		
Avg.	11	2311	27	3888	5	6097	2	8622	1	10318	2	13335	39	3790	7	7029	137	1592	27	2320	14	1341	153	1025

DAILY FLOW AND CONTINUOUS RECORDED QUALITY DATA

PRS Station No.: 752
Location: Wichita River near Mabelle, Texas
Water Year: 1961

Basin: Red River
Tributary to: Red River
Remarks: Records very good, Stratification nil.

Equations Used to Compute Constituents--
Chlorides: $Cl = 0.2318$ Sp. C.
Sulfates: $SO_4 = 0.0863$ Sp. C. + 229
Dissolved Solids: $DS = 0.6355$ Sp. C.

Discharge (cfs) and Specific Conductance, Micromhos/cm (μmhos)

Day	October		November		December		January		February		March		April		May		June		July		August		September	
	cfs	μmhos	cfs	μmhos	cfs	μmhos	cfs	μmhos	cfs	μmhos	cfs	μmhos	cfs	μmhos	cfs	μmhos	cfs	μmhos	cfs	μmhos	cfs	μmhos	cfs	μmhos
1	3	4000	729	3500	4	3425	4	3265	3	3679	3	4714	879	3593	294	3634	729	3758	217	3902	551	3976	443	3925
2	3	4000	729	3500	4	3425	4	3324	3	3616	3	4691	879	3558	291	3648	729	3750	369	3809	687	3950	268	3917
3	3	4091	729	3500	4	3437	4	3427	3	3474	3	4838	879	3638	297	3683	729	3750	305	3816	779	3950	224	3807
4	3	4150	729	3500	4	3400	4	3363	4	3272	3	4492	879	3663	192	3440	729	3750	266	3970	779	3950	87	3675
5	3	4137	729	3500	4	3470	4	3372	4	3127	3	4043	879	3600	428	3588	729	3769	266	3968	601	3940	6	3886
6	3	4100	729	3500	4	3471	4	3351	4	3118	4	3847	879	3600	604	3585	729	3770	266	3931	541	3925	5	3975
7	3	4138	729	3500	9	2230	4	3419	3	3246	4	3801	879	3600	604	3569	729	3763	266	3850	541	3925	5	3944
8	3	4138	729	3500	5	2840	4	3526	3	3486	4	3641	879	3600	604	3555	729	3758	266	3800	541	3925	5	3905
9	3	4087	729	3491	5	2879	4	3666	3	3635	4	3679	879	3600	604	3550	729	3773	266	3800	541	3925	5	3895
10	3	4050	729	3363	8	2289	4	3970	3	3756	4	3669	879	3658	604	3625	729	3776	266	3800	437	3909	5	3875
11	3	4050	729	3288	5	2580	3	4125	3	3775	5	3831	879	3658	604	3700	729	3763	266	3800	295	3875	5	4003
12	4	4050	267	3231	4	3105	3	4142	3	3816	5	3880	879	3610	604	3700	232	3756	267	3881	298	3842	7	3173
13	4	4050	6	3176	4	3238	3	4099	3	3752	563	3559	327	3607	607	3700	4	3800	270	3925	299	3800	5	3550
14	4	4050	6	3076	4	3200	4	4015	3	3772	879	3595	11	3724	626	3681	4	3652	270	3925	302	3933	5	3788
15	5	4044	5	2988	4	3200	4	3968	3	3944	879	3600	10	3679	228	3651	4	3631	270	3925	302	3990	5	3859
16	4	4000	5	3161	4	3175	4	4067	3	3681	956	3520	10	3693	4	3785	4	3648	270	3909	298	3990	5	3942
17	5	4000	5	3500	4	3200	4	4088	3	3938	939	3473	10	3784	3	3876	4	3650	270	3875	302	3985	4	3934
18	48	2978	4	3500	4	3200	4	4001	3	3659	885	3500	9	3839	4	3951	4	3725	126	3877	303	3950	4	4115
19	8	3000	4	3500	4	3384	4	3722	3	3326	879	3481	9	3842	95	3625	4	3844	150	4031	305	3950	4	4162
20	7	3012	4	3450	4	3336	4	3510	3	3881	879	3548	9	3827	654	3640	4	3969	497	4000	303	3941	4	4191
21	7	3087	4	3438	4	3138	4	3303	3	4375	882	3600	9	3804	654	3680	4	4086	652	3845	303	3947	4	4203
22	7	3125	4	3450	3	3175	4	3388	3	4627	901	3600	9	3795	654	3700	4	4175	253	3727	306	3949	4	4232
23	7	3087	4	3508	3	3250	4	3567	3	4750	904	3600	8	3725	654	3750	4	4156	4	3890	307	3903	4	4153
24	7	3712	4	3563	3	3394	4	3462	3	4537	904	3600	8	3727	654	3800	5	4100	3	4088	310	3850	4	4024
25	9	3605	4	3538	3	3388	4	3013	3	4494	901	3600	8	3800	508	3800	5	3869	3	4087	311	3850	4	3997
26	7	3624	4	3500	3	3388	4	3113	3	4641	882	3600	7	3800	5	3800	5	3990	3	4064	314	3839	4	4222
27	7	3800	4	3488	3	3351	4	3222	3	4571	879	3600	7	3800	4	3812	5	4050	4	4088	318	3825	4	4234
28	433	3725	4	3508	4	3275	4	3200	3	4521	879	3600	49	3691	4	3803	5	4050	4	4038	318	3901	4	4071
29	729	3738	4	3438	4	3263	4	3312			879	3600	294	3650	306	3714	5	4050	4	4028	318	3950	4	4109
30	729	3413	4	3425	4	3288	3	3541			879	3600	294	3630	729	3700	5	4025	4	3985	499	3950	4	4053
31	729	3			4	3203	3	3608			879	3600			729	3741			348	3987	604	3930		
Avg	90	3550	279	3459	4	3110	4	3582	3	3836	538	3573	388	3618	415	3668	278	3763	216	3889	416	3926	38	3883

DAILY FLOW AND CONTINUOUS RECORDED QUALITY DATA

PHS Station No.: 752
Location: Wichita River near Mabelle, Texas
Water Year: 1962

Basin: Red River
Tributary to: Red River
Remarks: Records very good. Stratification nil.

Equations Used to Compute Constituents--
Chlorides: Cl =0.2318 Sp. C.
Sulfates: SO_4=0.0863 Sp. C. + 229
Dissolved Solids: DS =0.6355 Sp. C.

Discharge (cfs) and Specific Conductance, Micromhos/cm (μmhos)

Day	October		November		December		January		February		March		April		May		June		July		August		September	
	cfs	μmhos	cfs	μmhos	cfs	μmhos	cfs	μmhos	cfs	μmhos	cfs	μmhos	cfs	μmhos	cfs	μmhos	cfs	μmhos	cfs	μmhos	cfs	μmhos	cfs	μmhos
1	4	3939	142	4081	3	4256	3	4127	3	4413	133	4400	122	4525	3	4775	4	4470	5	4913	5	4599	131	4599
2	4	3768	142	3900	3	4250	3	4113	3	4488	133	4375	120	4513	3	4735	4	4644	5	5014	5	4538	7	4531
3	3	4080	142	3910	3	4169	3	4231	3	4585	133	4300	120	4588	4	4789	4	4756	54	4867	6	4391	5	4594
4	3	4130	139	3910	3	4127	3	4284	3	4563	133	4300	120	4675	4	4749	4	4855	219	4800	6	4430	5	4600
5	3	4156	139	3900	3	4063	3	4033	3	4555	133	4417	50	4602	4	4738	5	5033	216	4788	6	4500	5	4600
6	3	4150	139	4072	3	4038	86	4195	3	4633	133	4600	6	4613	4	4600	6	5000	233	4735	42	4565	13	2602
7	3	4150	139	4148	3	3917	151	4159	3	4614	131	4600	6	4623	5	4574	6	5000	532	4650	337	4672	13	2447
8	3	4150	139	4060	3	3769	151	4246	3	4610	131	4575	5	4623	5	4749	7	4862	532	4600	482	4675	5	4322
9	3	4187	77	4003	3	3930	151	4259	3	4513	133	4525	4	4576	5	4900	9	4716	532	4588	482	4600	5	4501
10	3	4252	4	3995	3	3814	151	4209	3	4444	131	4488	4	4685	5	4900	7	4772	532	4715	482	4606	4	4590
11	4	4159	3	4000	3	3936	151	4159	3	4500	131	4463	4	4838	19	4642	7	4675	532	4813	482	4606	4	4743
12	4	4260	3	3987	3	4264	151	4134	3	4640	126	4535	3	4787	263	4557	6	4840	412	4800	482	4600	4	4644
13	95	4020	3	3825	3	4313	151	4144	3	4588	128	4600	3	4819	490	4600	6	5003	270	4800	482	4588	4	4475
14	149	4004	4	3876	3	4191	154	4103	181	4081	128	4588	3	4778	483	4525	6	5025	437	4800	482	4600	4	4480
15	149	3994	4	3470	3	4200	154	4187	366	4188	128	4563	3	4663	482	4658	6	5200	438	4800	482	4616	5	4387
16	149	4059	3	3890	4	4202	123	4161	343	4200	128	4525	3	4524	381	4710	6	5200	438	4785	482	4600	5	4359
17	146	4026	3	3962	3	4200	4	4155	366	4225	126	4488	3	4705	322	4500	6	5200	438	4788	482	4600	4	4374
18	146	3996	3	4010	3	4258	4	4140	251	4200	126	4475	3	4775	322	4375	7	4825	438	4800	482	4588	4	4440
19	146	3956	3	3831	3	4232	4	3900	144	4350	126	4438	95	4690	146	4279	6	4663	438	4800	482	4550	4	4412
20	146	3906	3	3936	3	4224	4	3857	133	4400	128	4563	212	4625	5	4498	6	4922	409	4800	482	4513	4	4287
21	144	3853	3	4187	3	4245	3	4061	133	4400	128	4625	212	4625	5	4675	6	4834	266	4800	483	4540	4	4313
22	144	3841	4	3923	3	4169	3	3785	133	4400	128	4600	281	4600	5	4811	6	4793	266	4775	486	4600	4	4338
23	144	3791	3	3978	3	4092	3	4094	133	4388	126	4600	450	4525	178	4774	6	4783	266	4700	487	4600	5	4272
24	144	3741	3	4113	3	4065	3	4333	133	4338	126	4575	450	4631	654	4855	6	4756	266	4600	490	4588	5	4250
25	144	3930	3	4109	3	4097	3	4457	133	4283	124	4525	368	4794	654	4900	6	4758	266	4575	494	4538	5	4162
26	144	4091	3	4086	3	4108	3	4288	133	4382	124	4500	4	4667	654	4900	5	4975	135	4453	492	4500	4	4325
27	144	4006	3	3886	3	4098	3	4263	133	4481	124	4563	5	3820	654	4913	5	5000	5	4600	424	4500	4	4400
28	142	4000	3	3747	3	4194	3	4241	133	4419	124	4650	4	4305	654	4950	5	5000	5	4600	338	4493	4	4459
29	142	4000	3	3938	3	4125	3	4339			124	4625	3	4700	274	4950	7	5000	5	4600	338	4567	4	4400
30	142	4131	3	4175	3	4184	3	4419			122	4600	3	4822	4	4813	5	4963	5	4732	338	4600	4	4355
31	142	4185			3	4203	3	4422			122	4575			4	4735			5	4700	338	4600		
Avg.	89	3976	42	3995	3	4128	53	4177	103	4284	128	4523	89	4622	216	4749	6	4888	272	4735	367	4581	9	4226

DAILY FLOW AND CONTINUOUS RECORDED QUALITY DATA

PHS Station No.: 758
Location: Wichita River near Seymour, Texas
Water Year: 1961

Basin: Red River
Tributary to: Red River
Remarks: Records fair. Occasional minor stratification.

Equations Used to Compute Constituents--
Chlorides: Log Cl =1.1905 Log Sp.C.-1.3329
Sulfates: Log SO_4=0.8064 Log Sp.C.-0.0992
Dissolved Solids: DS =0.6898 Sp. C.

Discharge (cfs) and Specific Conductance, Micromhos/cm (μmhos)

Day	October		November		December		January		February		March		April		May		June		July		August		September	
	cfs	μmhos	cfs	μmhos	cfs	μmhos	cfs	μmhos	cfs	μmhos	cfs	μmhos	cfs	μmhos	cfs	μmhos	cfs	μmhos	cfs	μmhos	cfs	μmhos	cfs	μmhos
1	14	8739	148	10481	45	16837	93	14432	50	17138	44	17149	400	2981	19	18740	35	17836	36	13773	36	8794	4	12484
2	12	8937	132	10488	45	16944	76	14500	47	17211	41	17275	216	3895	19	19000	33	18025	36	14457	30	8442	3	12856
3	10	11160	119	10632	45	16618	70	14600	44	17300	41	17412	144	6031	139	6018	33	17707	431	3859	26	8555	154	2978
4	11	13531	109	11165	47	16495	62	14800	46	17205	40	17388	105	7035	2290	1846	171	8481	173	10605	23	8752	2966	1825
5	17	15189	99	11481	47	16809	58	15000	62	15798	38	17312	80	8213	2450	1794	107	9965	61	6407	18	9801	871	2310
6	20	13342	91	11629	53	16656	55	15400	64	15282	37	17676	67	9730	3608	1352	382	10477	36	7207	15	9801	193	2360
7	16	11811	86	12513	362	8175	55	15800	99	13177	36	17949	61	11606	1280	1386	193	9736	46	7782	14	10895	105	3187
8	13	11925	84	13001	255	7943	54	16200	94	13413	34	18075	55	12433	560	2867	191	12653	43	5050	11	11444	70	4388
9	11	12977	80	13000	263	8000	51	16400	72	14187	34	18063	53	13298	300	7300	99	9895	126	5414	10	9888	52	5628
10	10	15193	73	13197	716	7832	51	16650	63	15669	34	18150	51	14136	224	7715	89	9412	171	5338	8	9843	42	6420
11	8	15867	71	13731	424	7833	51	16350	56	16148	34	18163	50	14753	177	9482	61	11000	64	9617	8	10558	36	7333
12	9	15935	71	14031	228	7203	51	16540	51	16423	34	18338	46	15223	145	10449	48	13000	55	10846	110	10794	125	5133
13	13	10867	69	14001	171	9000	51	16800	47	16790	34	18810	44	15499	124	11278	39	13272	887	4678	89	4503	174	3799
14	10	6242	66	14586	134	10000	51	16800	45	17000	34	19000	41	15923	107	12053	34	13500	506	3101	52	8112	51	5000
15	223	1382	66	14825	115	11000	50	16788	45	16738	34	19000	38	16137	95	12671	35	13692	317	2845	1526	1741	33	6396
16	1619	2676	63	14851	98	12000	48	17036	45	16675	676	2617	37	16012	86	13357	57	13595	397	5558	338	2816	28	8092
17	2135	2476	61	14887	88	12500	47	17300	44	16849	1432	4467	36	16623	78	14095	53	13223	410	5282	112	4272	26	9275
18	4902	826	58	15051	81	13000	47	17036	41	16975	842	3887	35	16838	72	14611	50	13103	201	5547	68	4639	23	10347
19	5100	885	55	15082	77	13500	45	16488	40	16963	445	4109	34	16875	200	9043	48	14108	107	5318	523	2079	21	11048
20	6195	1119	55	15000	74	14000	43	16400	45	16877	229	5458	32	17049	242	15378	47	14467	65	6278	283	2075	19	11423
21	1521	1234	55	15392	68	14500	42	16400	79	15433	156	6025	30	17174	107	11740	41	15516	1048	2250	67	3358	18	11575
22	596	1201	53	15465	66	15000	42	16400	71	15728	118	6807	28	17275	74	9390	35	16422	4940	1208	43	6796	17	11981
23	400	500	50	15387	63	15000	42	17000	75	15364	94	7794	27	17461	62	10790	30	17122	1378	1790	31	9070	16	13124
24	295	6000	50	15756	61	15000	43	17000	74	15972	76	8398	25	17846	56	13193	28	17450	437	2090	26	9601	14	13223
25	315	5213	50	15944	60	15500	40	17500	64	16779	77	9053	23	18161	57	14641	614	4171	219	2563	20	9685	14	13791
26	572	4246	48	15639	60	16000	35	17500	56	16974	111	10783	22	18263	65	15056	536	4281	153	3262	15	9529	13	14100
27	449	4414	48	15818	58	16401	31	17500	51	17107	62	10444	22	18238	50	13975	160	3514	117	4156	12	9503	13	14100
28	311	4487	47	16506	58	16232	31	18000	47	17089	58	13279	21	18275	49	14146	104	5120	94	5049	10	10490	13	14126
29	248	6800	46	16664	58	16000	40	18000			51	14447	20	18375	44	16225	63	7485	74	5998	8	11669	22	14811
30	200	8000	45	16626	58	16082	46	18000			1328	3655	20	18300	40	17035	45	9741	58	6666	7	11960	16	16045
31	167	9000			91	14093	48	17000			1331	2458			37	17423			46	7955	6	12087		
Avg.	1465	1337	72	13433	131	10490	50	16097	58	15956	246	5194	62	9827	415	3647	115	9526	411	2870	114	3324	172	2902

DAILY FLOW AND CONTINUOUS RECORDED QUALITY DATA

PHS Station No.: 758
Location: Wichita River near Seymour, Texas
Water Year: 1962

Basin: Red River
Tributary to: Red River
Remarks: Records fair. Occasional minor stratification.

Equations Used to Compute Constituents--
Chlorides: Log Cl =1.1905 Log Sp.C.-1.3329
Sulfates: Log SO4=0.8064 Log Sp.C.-0.0992
Dissolved Solids: DS =0.6898 Sp. C.

Discharge (cfs) and Specific Conductance, Micromhos/cm (µmhos)

Day	October		November		December		January		February		March		April		May		June		July		August		September	
	cfs	µmhos	cfs	µmhos	cfs	µmhos	cfs	µmhos	cfs	µmhos	cfs	µmhos	cfs	µmhos	cfs	µmhos	cfs	µmhos	cfs	µmhos	cfs	µmhos	cfs	µmhos
1	12	16134	59	7833	30	15812	25	17850	23	18456	20	19870	12	20026	72	4389	14	9525	132	6852	200	2561	13	3623
2	393	3821	2337	1927	30	16800	26	17675	23	18225	22	19625	11	20433	45	5719	68	9000	77	11717	634	1345	658	2320
3	105	3803	823	4016	30	16675	26	18106	22	18541	21	20000	11	21281	33	6960	85	6500	55	11769	125	2264	901	2500
4	43	3920	215	3733	30	16778	26	18723	21	18925	21	20074	21	15673	26	8236	45	5256	45	10905	116	8404	325	3155
5	34	5032	115	4347	29	17400	29	18032	21	19418	20	20439	66	12246	22	9466	890	1949	39	11385	64	9700	806	2558
6	29	9745	72	6745	29	17300	33	17976	20	19397	19	20500	38	10406	21	11457	3576	1953	35	12121	40	7595	3446	599
7	25	11860	55	8766	29	17454	34	16832	20	19344	18	20451	152	10910	20	12565	2673	2473	32	12500	31	7420	4142	676
8	22	12749	47	9417	38	14706	33	17080	20	19456	17	20226	80	10950	23	13838	2229	1304	28	12500	21	8010	2498	898
9	22	13269	41	10743	34	15578	26	18058	20	19706	16	20101	35	14212	37	14355	2957	962	27	12500	16	8686	425	1799
10	52	15010	38	12323	32	16349	20	18918	20	19956	16	19746	26	14535	22	16318	1907	1179	26	12809	12	9459	177	2688
11	132	12104	37	12824	31	17034	16	19440	20	19881	14	20445	20	12685	35	17910	1772	2324	25	13547	10	10769	121	3528
12	68	6483	35	13248	27	17898	16	19044	20	20101	13	20769	17	14156	27	17430	1061	2051	23	13800	8	11072	94	4954
13	51	8239	33	13425	29	17875	21	18014	21	20050	12	21000	16	16356	19	16451	558	2630	20	13996	8	11524	78	5527
14	38	11644	34	13747	30	17575	27	16333	21	20000	12	20925	14	18316	15	16750	712	3573	18	14151	8	11950	64	6244
15	32	12374	280	5983	30	17477	27	16224	21	19625	12	20774	14	18849	14	14824	346	2436	23	14473	7	12288	53	6473
16	28	12771	207	5625	39	15767	32	16418	21	19750	13	20726	13	19000	12	15447	215	3149	29	14962	6	12646	50	6159
17	26	13099	68	7382	35	16000	30	17532	21	20350	13	21025	13	19542	11	16787	148	3895	25	10637	5	12918	823	2137
18	24	13299	50	8002	33	17006	29	18186	21	20176	13	20898	13	20300	10	17771	166	3632	47	10040	5	13278	1118	3222
19	22	13425	42	9600	32	17900	26	18492	20	20002	14	20449	13	20849	10	18076	145	4267	29	5496	4	13274	880	3839
20	21	13958	38	11688	30	17775	25	19086	20	19875	20	18594	12	21243	8	18000	85	6143	20	7441	4	13474	329	2070
21	21	15200	36	12280	29	17426	25	18297	20	19500	20	18526	11	22000	7	18096	71	7603	162	5335	4	13779	184	3405
22	20	15125	75	9000	28	17841	21	18731	20	19625	17	19541	11	22000	106	17786	61	8869	42	3858	4	14000	129	4297
23	20	15175	53	9590	27	18000	21	17837	20	20225	16	20613	11	21741	44	8009	54	9098	28	7058	3	14000	101	4981
24	19	15200	37	11541	27	17925	29	17225	20	20225	14	21475	14	20817	22	9164	48	9594	24	8294	3	14123	82	5723
25	19	15995	34	13598	27	17350	28	17151	20	20050	14	21400	81	18252	14	9956	45	10634	241	3867	4	14575	119	5526
26	18	16800	33	14173	27	17150	33	17443	21	20298	14	21325	26	12567	11	10905	42	11222	196	2444	4	14846	223	2558
27	18	16876	32	15143	26	17764	34	18058	21	20055	14	21577	656	3941	31	12349	103	9614	172	3415	3	13780	106	5471
28	19	17025	30	15775	26	18175	29	17949	19	19900	12	21606	2595	1922	92	8804	78	9026	125	2647	3	12742	80	7153
29	19	17000	30	15750	26	18150	27	18195			11	21200	591	2047	163	3748	100	9598	286	3245	2	13842	64	8184
30	20	17286	30	15700	26	18100	25	18574			16	18657	150	3758	25	5871	117	7365	111	6038	2	14100	53	8137
31	141	9056			26	18000	24	18726			15	19229			34	8953					94	10833	12	7876
Avg.	49	9033	167	4629	30	17115	26	17851	21	19667	16	20272	158	4303	33	10419	679	2233	72	6533	44	4027	605	1794

DAILY FLOW AND CONTINUOUS RECORDED QUALITY DATA

PHS Station No.: 756
Location: South Fork of Wichita River near
Water Year: 1961 Benjamin, Texas

Basin: Red River
Tributary to: Wichita River
Remarks: Records fair.
Stratification nil.

Equations Used to Compute Constituents--
Chlorides: Log Cl =1.2156 Log Sp.C.-1.6418
Sulfates: Log SO_4=0.6311 Log Sp.C.+0.6483
Dissolved Solids: DS =0.7177 Sp. C.

Discharge (cfs) and Specific Conductance, Micromhos/cm (μmhos)

Day	October		November		December		January		February		March		April		May		June		July		August		September	
	cfs	μmhos	cfs	μmhos	cfs	μmhos	cfs	μmhos	cfs	μmhos	cfs	μmhos	cfs	μmhos	cfs	μmhos	cfs	μmhos	cfs	μmhos	cfs	μmhos	cfs	μmhos
1	.5	33000	32	18254	10	26517	15	24800	10	26338	8	25583	38	9500	4	24869	14	23672	6	25724	3	21500	0	-
2	.4	33000	29	18119	10	26901	15	24800	9	26239	8	26074	27	10500	4	32901	13	23924	6	25308	3	22000	0	-
3	.5	33000	27	18315	11	26861	13	24849	9	26238	7	26362	20	16000	31	4410	14	23744	13	24513	3	22200	178	4000
4	2	30000	26	18812	11	26467	12	24800	9	26200	7	25854	16	19394	2777	2600	86	11497	7	22070	2	22300	581	3000
5	5	25000	25	19088	10	26855	12	24644	10	26200	7	26150	13	20359	2988	1559	212	9453	5	19579	2	22500	38	5000
6	5	25000	24	19388	11	27098	11	24850	11	26105	7	26283	12	20886	312	3250	70	7345	4	17871	2	23000	17	10000
7	4	26000	22	21349	14	25301	12	24751	13	25302	6	28000	12	21275	168	5533	35	9839	4	15976	2	23400	11	14000
8	3	27000	21	21316	15	25299	12	24800	13	24716	6	28234	12	21568	121	8097	25	12081	5	15855	1	23800	8	16500
9	1	27000	20	21449	18	24505	11	24762	13	25000	5	27141	10	22290	93	11285	20	13874	16	19345	1	24000	6	17500
10	.6	28000	19	21533	24	23263	12	24798	12	24594	6	28294	10	23793	76	12654	18	14896	11	25008	1	24200	6	18500
11	.3	29000	18	21916	25	22969	11	25000	11	30906	6	27400	9	24974	64	13825	16	15778	12	21861	.8	24600	5	20000
12	.1	30000	18	22000	23	21644	11	25025	10	48923	6	27381	9	25451	55	14816	14	16945	11	16632	.8	24800	8	17313
13	.1	31000	18	22000	19	20930	11	24663	9	28386	6	28061	8	26159	47	15825	12	17810	8	21408	.6	25000	6	17748
14	.1	33000	17	22573	17	21327	11	25075	9	25244	6	29105	8	26675	41	16645	10	18612	7	21282	15	2000	6	18414
15	722	6000	17	23604	14	21847	11	24988	9	24844	6	28092	7	26846	38	17171	14	17143	101	9284	2	6102	5	19811
16	1171	2000	15	23695	14	22609	10	25297	9	24800	92	8000	6	27000	34	17723	15	17483	25	7056	.5	18770	5	20702
17	444	1530	15	23538	13	22901	10	25159	9	25475	98	7000	6	26645	32	18460	17	18824	15	10231	1	19862	4	20944
18	7810	1278	15	23966	13	22871	10	25800	8	25798	22	10000	6	26026	55	15388	26	19654	10	16455	2	24629	4	21470
19	3825	1374	14	24000	13	23471	10	25975	8	25900	16	15000	6	26287	47	12382	25	21048	7	19301	8	21000	4	22007
20	419	2343	14	23950	12	23549	10	26000	10	38513	15	19000	6	27915	32	17524	18	22357	5	19702	4	23000	3	22715
21	175	5369	14	24498	11	24083	10	26000	13	45041	13	23000	5	29101	29	17933	14	21399	218	2601	2	25000	3	23782
22	119	8274	13	25166	12	24066	10	26000	15	31743	12	25000	5	28788	26	19253	12	18514	245	2114	.7	28063	3	23987
23	92	10210	12	25068	12	24050	10	25831	14	18217	10	27000	5	29024	23	20108	10	18964	27	2794	.5	27347	3	24652
24	75	11543	12	25000	12	23891	10	26800	12	17329	9	28000	5	29090	21	20424	10	19096	15	7000	.6	28040	2	25372
25	65	12386	12	25133	12	24106	10	26376	11	17310	11	26000	4	29000	22	20727	9	17800	10	11070	.6	28000	2	25912
26	58	13193	12	25250	12	24183	9	26127	10	17148	10	26500	4	29000	28	20447	9	21588	9	14743	.4	28000	2	25721
27	64	13735	12	26183	12	24723	8	26186	9	21717	8	26500	4	29000	19	17184	8	24961	8	17103	.2	27000	2	24293
28	57	14577	12	27265	12	25200	9	26148	8	25197	8	26500	4	29000	18	19550	8	25397	6	18429	.1	26000	2	24879
29	47	15098	11	27000	12	25200	10	25684			11	28000	4	28885	18	22496	7	25488	5	20000	.1	26000	1	24381
30	40	16012	10	26815	12	25173	10	26123			345	5000	4	28044	16	23000	6	25474	4	20500	.1	26000	1	24128
31	35	18316			15	24342	11	26463			81	7000			15	23261			3	21000	0	-		
Avg.	492	2185	18	22021	14	23985	11	25376	11	26803	28	21014	9	20941	234	3980	26	14106	27	7416	2	16861	30	5217

DAILY FLOW AND CONTINUOUS RECORDED QUALITY DATA

PRS Station No.: 756
Location: South Fork of Wichita River near
Water Year: 1962 Benjamin, Texas

Basin: Red River
Tributary to: Wichita River
Remarks: Records fair.
Stratification nil.

Equations Used to Compute Constituents--
Chlorides: Log Cl =1.2156 Log Sp.C.-1.4418
Sulfates: Log SO_4=0.6311 Log Sp.C.+0.6483
Dissolved Solids: DS =0.7177 Sp. C.

Discharge (cfs) and Specific Conductance, Micromhos/cm (μmhos)

Day	October		November		December		January		February		March		April		May		June		July		August		September	
	cfs	μmhos	cfs	μmhos	cfs	μmhos	cfs	μmhos	cfs	μmhos	cfs	μmhos	cfs	μmhos	cfs	μmhos	cfs	μmhos	cfs	μmhos	cfs	μmhos	cfs	μmhos
1	1	24000	40	16916	7	26717	7	28200	6	30021	5	32913	4	35498	9	25905	57	7630	23	6579	4	16179	44	8600
2	7	20832	261	22970	7	28000	7	29050	6	30200	6	32901	4	35100	8	28706	18	4608	13	13742	3	20463	251	2600
3	9	24331	54	20569	7	28000	7	29818	6	30232	6	33000	4	36533	7	29220	7	4272	10	21013	3	23556	159	2100
4	4	27964	24	14678	7	27740	7	29582	5	30000	5	33000	5	36489	6	28448	15	4730	7	20649	16	29674	31	4500
5	3	25639	14	17705	7	27031	7	29059	5	30642	5	33471	8	33353	5	28391	400	5130	6	20000	10	31000	42	11839
6	3	23831	10	17721	7	26765	8	28814	5	31093	5	33875	4	27434	4	26955	477	4400	5	20234	6	31467	1085	2162
7	3	22112	8	18148	7	27820	8	28349	5	31156	5	33675	19	24982	4	26516	247	2650	4	21191	3	32274	470	3342
8	2	23171	7	19238	8	27862	8	29135	5	31862	5	33548	10	29748	6	22071	447	2050	4	21948	2	32609	230	2884
9	3	22021	6	20187	9	29000	7	29144	5	31975	5	33302	8	21852	20	21309	515	1700	3	22705	.9	32843	97	7403
10	16	22985	6	20633	9	29000	5	29481	5	32038	5	33000	7	20569	12	17727	810	2200	3	23300	.4	33643	55	7070
11	20	21246	6	22000	8	28505	4	30919	5	31750	5	33000	6	28283	10	14998	303	2100	2	23580	.1	34115	38	8411
12	10	27996	6	22000	7	27295	5	30946	5	32125	5	34161	6	30982	8	17053	196	3862	2	23579	0	-	31	9518
13	8	23591	6	21460	7	27003	7	29686	5	32281	5	34874	5	32000	7	18045	449	2900	1	24616	0	-	26	11389
14	6	18080	7	19283	5	27021	8	28820	5	32000	5	34125	5	32739	6	21531	136	2332	6	19490	0	-	25	12595
15	4	18883	25	10389	5	27507	8	29938	5	32000	5	34063	4	34238	5	22865	72	4583	14	15867	0	-	23	14067
16	4	22405	15	13296	8	27109	9	30295	5	32525	5	34438	4	35038	5	23971	45	6257	3	7305	0	-	36	11464
17	4	24686	12	16129	8	26350	9	30000	5	33076	5	35000	4	35000	4	25953	33	7500	2	9483	0	-	587	4880
18	3	25563	11	17228	8	27205	9	29586	5	32996	5	34874	4	35153	4	27855	25	9492	2	10728	0	-	654	2571
19	3	25394	9	17527	8	27921	8	28463	5	33542	6	34721	4	35451	4	29496	21	11732	31	2600	0	-	156	3288
20	3	26906	9	21266	8	28004	6	28647	5	33875	6	33638	4	35483	3	30742	19	12931	7	2500	0	-	74	5230
21	3	28886	8	24600	7	28000	7	29000	5	33125	6	33297	4	36754	3	31025	16	13897	5	3442	0	-	42	7365
22	3	28800	10	25506	7	28314	8	28119	5	33000	6	34000	3	35626	3	31422	14	14746	1	2726	0	-	28	8896
23	3	28963	9	26000	7	28237	9	28786	5	33000	6	34123	3	36666	2	31733	12	15739	22	2262	0	-	22	10580
24	3	28719	8	26062	7	27775	10	28884	5	33125	5	34329	4	35926	2	32000	10	16294	22	5000	0	-	19	11965
25	3	27906	7	26497	7	27157	10	29000	5	33625	5	34052	4	36077	2	32000	9	17080	26	12000	0	-	21	12298
26	3	27468	7	26936	7	27751	9	29235	5	33733	4	34549	16	2100	2	32000	9	17848	13	20000	0	-	23	14050
27	3	28021	7	26603	7	28469	8	29558	4	31305	4	34950	437	2500	2	32000	8	18694	7	23000	0	-	19	14747
28	3	27900	7	26038	7	28169	7	29115	4	31164	4	35000	209	3389	2	32655	9	20005	18	12000	0	-	17	15467
29	3	27912	7	25863	7	28457	7	29375			4	35000	19	15221	.9	33500	19	22057	40	8000	0	-	15	15500
30	3	27384	7	25944	7	28538	7	29957			4	35104	10	22568	.5	34118	67	12324	6	6500	0	-	13	16500
31	4	26865			7	28200	6	29811			4	35948			1	17498			5	8508	62	6200		
Avg.	5	24390	20	20878	7	27783	7	29269	5	32023	5	33997	28	8167	5	24051	149	3638	10	10758	4	15817	144	4082

DAILY FLOW AND CONTINUOUS RECORDED QUALITY DATA

PHS Station No.: 757
Location: North Fork of Wichita River near
Water Year: 1961 Truscott, Texas

Basin: Red River
Tributary to: Wichita River
Remarks: Records fair.
Stratification nil.

Equations Used to Compute Constituents--
Chlorides: Log Cl =1.1926 Log Sp.C.-1.3468
Sulfates: Log SO_4=0.7618 Log Sp.C.+0.1146
Dissolved Solids: DS =0.6942 Sp. C.

Discharge (cfs) and Specific Conductance, Micromhos/cm (μmhos)

Day	October		November		December		January		February		March		April		May		June		July		August		September	
	cfs	μmhos	cfs	μmhos	cfs	μmhos	cfs	μmhos	cfs	μmhos	cfs	μmhos	cfs	μmhos	cfs	μmhos	cfs	μmhos	cfs	μmhos	cfs	μmhos	cfs	μmhos
1	9	18000	29	9843	22	17000	35	15025	29	16300	27	16100	42	7500	23	19073	13	20900	17	10700	13	14934	4	17444
2	8	19000	29	10725	21	17050	30	14976	28	16300	26	16100	34	11000	24	19724	12	20873	19	9600	10	15761	3	16504
3	8	20000	29	11361	21	17087	26	14974	27	16300	25	16025	30	12500	27	19023	37	13752	33	7200	9	16207	274	4500
4	16	19172	27	11862	23	17000	25	15000	29	16246	24	16163	28	14300	63	9000	22	7200	15	15157	8	16289	346	3000
5	20	15663	28	12370	24	16908	25	14900	38	15894	24	16500	27	14324	87	7000	18	15684	13	17341	8	16300	51	6000
6	17	16534	27	12599	25	16626	25	14800	39	15133	24	16896	26	14675	49	9000	82	9912	11	17994	7	16300	28	7511
7	13	17352	26	13354	29	15684	25	14875	38	14875	24	17074	27	14800	28	11000	76	5511	19	11718	7	17079	18	9853
8	10	18490	27	14088	31	15182	24	14900	37	14776	23	17523	29	14800	21	13000	60	7550	29	12223	7	18000	13	13315
9	10	19696	26	14120	32	15226	23	14900	34	14699	22	17800	28	13658	18	15000	41	6527	78	5261	6	18362	11	15042
10	9	20756	28	14157	49	13849	24	15382	33	14899	23	17875	25	15170	17	16548	24	8500	61	11631	5	19022	10	16241
11	9	20911	28	14344	46	12257	24	15900	30	14976	24	17900	24	16700	17	17299	19	11500	35	10256	5	19073	8	17035
12	10	19829	28	14344	37	12484	25	15909	29	14801	24	17825	24	16625	16	17848	15	14500	930	2385	64	9553	12	16878
13	11	19586	29	14123	31	13002	25	15925	28	15320	23	17906	23	16625	15	18024	12	16640	486	1341	23	4600	14	17228
14	11	19446	27	14325	27	13357	24	15900	28	16000	23	18000	23	16725	14	18175	16	15499	93	3039	112	4000	10	18069
15	338	6811	27	14932	25	13800	23	15950	28	16000	23	17975	22	16950	14	18325	22	14681	154	2826	252	2993	8	19164
16	889	4529	26	15001	24	14097	23	16203	28	16000	129	6667	22	17000	14	18500	29	15219	248	2300	49	5254	7	18868
17	480	2351	25	15000	23	14400	23	16475	28	16000	462	3431	22	17412	16	19060	28	17500	80	3821	36	14963	7	18636
18	5959	1028	25	15088	23	14500	24	16350	27	16000	205	3500	23	17975	29	12747	24	19000	41	4773	20	15040	6	19891
19	1816	900	25	15201	24	15176	24	16200	27	16000	68	6500	23	17825	49	10662	22	20000	30	6192	35	10461	7	21051
20	369	1000	26	15157	24	15695	24	16200	32	15725	51	9000	23	17808	23	13126	19	20190	22	7284	31	6092	14	19936
21	135	1700	25	15367	23	15600	24	16200	47	14693	41	11902	23	17875	22	16341	17	20748	127	2543	29	9746	9	18322
22	84	2800	24	15704	23	15600	26	16200	48	14052	34	12809	23	17875	17	18551	16	20883	638	2777	22	14397	8	18693
23	62	4600	23	15469	25	15600	25	16756	38	13877	30	13563	22	17800	14	20000	14	20214	248	1800	12	15379	6	19729
24	53	7000	23	15700	24	15600	26	17078	33	13974	29	13818	22	18192	14	20000	13	20044	66	3000	8	16205	6	20564
25	122	4912	23	15987	23	15600	21	16900	32	14000	30	13387	21	18800	17	19819	466	4000	43	5200	6	16888	6	22360
26	358	3629	22	16037	23	15600	20	16900	30	14049	30	13819	21	18800	18	19813	80	7600	38	7300	5	17213	6	22467
27	138	4500	22	16000	22	16086	20	16738	28	15177	28	14461	22	18800	16	20524	51	10031	31	9000	5	17215	5	22550
28	61	6000	22	16575	23	16349	21	16674	28	16125	28	15426	23	18800	14	20575	31	9700	26	10000	4	17150	6	23131
29	41	7000	22	17188	24	16200	26	16523			67	6832	23	18725	14	21025	23	10900	21	11000	4	17448	6	22169
30	34	8000	22	17013	26	16146	33	16585			240	3581	23	18500	14	21550	19	10500	18	12000	4	17522	6	22427
31	30	9000			33	15445	31	16428			74	4000			14	21205			15	13000	4	17381		
Avg.	359	2094	26	14299	27	15082	25	15899	32	15210	61	7992	25	15852	24	14551	44	9088	119	3455	26	7965	31	7251

DAILY FLOW AND CONTINUOUS RECORDED QUALITY DATA

PMS Station No.: 757
Location: North Fork of Wichita River near
Water Year: 1962 Truscott, Texas

Basin: Red River
Tributary to: Wichita River
Remarks: Records fair.
Stratification nil.

Equations Used to Compute Constituents--
Chlorides: Log Cl =1.1926 Log Sp.C.-1.3468
Sulfates: Log SO_4=0.7618 Log Sp.C.+0.1146
Dissolved Solids: DS =0.6942 Sp. C.

Discharge (cfs) and Specific Conductance, Micromhos/cm (µmhos)

Day	October		November		December		January		February		March		April		May		June		July		August		September	
	cfs	µmhos	cfs	µmhos	cfs	µmhos	cfs	µmhos	cfs	µmhos	cfs	µmhos	cfs	µmhos	cfs	µmhos	cfs	µmhos	cfs	µmhos	cfs	µmhos	cfs	µmhos
1	6	23000	64	9076	18	19723	17	19550	17	21500	13	19954	13	22951	12	16959	73	5281	31	8089	17	9694	40	3911
2	24	17200	380	3149	18	20250	17	19697	17	21275	17	20391	12	22949	10	18671	50	9436	17	12151	74	9913	312	4380
3	21	20309	61	9447	18	20025	18	19701	17	21000	18	20275	11	23272	9	20122	23	13774	12	14128	142	5086	219	3535
4	14	19046	36	12498	18	19464	19	19273	16	21000	17	20287	14	22700	8	21184	23	11900	7	15753	52	6819	468	3371
5	10	20091	23	14167	19	19000	30	16630	15	20512	16	20354	27	20754	16	17805	245	3900	6	17344	34	6921	143	2810
6	9	20409	18	15543	19	19090	32	16021	15	19894	16	20869	36	18796	15	6339	737	4100	5	18264	23	10725	404	1611
7	8	17975	16	16174	20	19696	26	16418	15	19944	16	20577	34	15863	7	18718	252	2400	4	19252	17	13617	91	3474
8	8	17550	16	16990	24	18538	22	16560	16	19921	17	21000	19	19189	40	23677	141	2500	4	20050	14	15353	59	4274
9	110	6803	15	17964	25	17849	15	11558	16	20125	17	21000	15	20634	33	23425	251	2000	4	21236	12	16574	29	8156
10	115	4247	15	18173	23	18000	10	14371	16	20212	17	21000	14	21346	25	22438	305	1750	4	22000	10	17553	21	11804
11	28	9416	15	18547	20	18073	9	15801	16	20013	14	21000	13	21894	10	18343	231	2000	3	22745	9	17065	15	13662
12	20	13608	14	18571	12	18215	10	16994	16	20458	13	21342	12	22500	5	18942	291	2395	3	23000	8	17123	11	15136
13	17	15844	13	18882	15	18249	15	20057	16	20875	12	21425	12	22624	4	20472	190	2480	2	23000	8	19608	9	16420
14	16	17000	16	18465	20	17746	20	18517	16	20600	13	21373	11	22826	4	21495	90	3666	3	21882	9	20000	8	17134
15	15	18000	31	15302	23	18561	24	17949	16	20675	14	21200	9	22700	4	22212	42	5908	2	21959	9	20671	7	18000
16	15	19000	33	14610	23	17197	21	17249	16	20650	14	21324	8	23458	5	22953	31	7877	2	22827	8	21581	6	17685
17	14	19675	23	15352	24	16594	21	17500	16	21000	13	21427	9	24000	5	23544	24	9008	2	23621	8	22293	724	4040
18	13	20087	19	16741	24	17741	18	17803	16	20900	12	21301	10	24000	5	24545	20	11073	3	23035	7	22430	558	1955
19	13	21119	17	17264	21	18473	15	17896	16	20784	13	21807	11	24000	5	24936	19	13096	4	22248	4	22518	127	2429
20	13	21712	17	17789	20	18980	11	18496	16	20949	17	21149	10	24115	36	21390	18	14147	5	22929	4	22084	48	4558
21	13	22444	18	18100	19	19200	14	18831	17	20574	17	20815	7	24335	205	3803	19	15316	20	17466	3	22000	31	6828
22	13	21800	19	18423	19	19100	11	18107	18	20575	15	20869	7	23974	21	7196	11	15948	9	22858	2	21590	27	8192
23	13	21150	19	18600	18	19200	15	19172	17	20649	13	21301	7	24552	11	10668	10	17200	7	24841	2	21370	25	8965
24	13	21281	18	18934	17	19125	20	18654	16	20775	12	21226	12	24096	7	14668	8	17200	28	19210	2	21750	20	10004
25	13	20775	17	19049	17	19100	24	18152	17	20675	11	21647	17	24000	7	18969	8	17729	23	15594	2	21825	42	7261
26	13	21008	17	18676	17	19473	21	18334	18	20685	11	22233	23	22503	104	7465	22	13452	15	16093	2	21473	71	7000
27	13	21445	16	19344	16	19827	20	18078	17	20087	11	22650	359	4083	19	5581	119	5150	54	15080	2	21609	39	8950
28	14	20790	16	19975	16	19850	19	18207	11	20105	11	22723	83	5226	8	10038	82	8545	32	9253	2	21800	30	9700
29	15	22032	16	19699	17	19872	18	18555			10	23000	27	9413	4	14139	62	5113	103	10501	2	21900	25	13901
30	19	21076	17	19259	17	19875	17	18950			11	23131	16	14474	2	17650	47	5828	94	13169	2	22000	20	14044
31	20	20712			17	19750	17	20844			13	23121			2	18113			33	13121	34	5509		
Avg.	21	14287	34	10906	19	18815	18	17850	16	20598	14	21246	29	12133	21	11865	115	4040	17	14147	17	10174	121	3952

DAILY FLOW AND CONTINUOUS RECORDED QUALITY DATA

PHS Station No.: 771
Location: North Fork of Wichita River near Paducah, Texas
Water Year: 1961

Basin: Red River
Tributary to: Wichita River
Remarks: Records very good. Stratification nil.

Equations Used to Compute Constituents--
Chlorides: Log Cl =1.1380 Log Sp.C.-1.1025
Sulfates: SO_4=0.1007 Sp. C.
Dissolved Solids: DS =0.6942 Sp. C.

Discharge (cfs) and Specific Conductance, Micromhos/cm (μmhos)

Day	October		November		December		January		February		March		April		May		June		July		August		September	
	cfs	μmhos	cfs	μmhos	cfs	μmhos	cfs	μmhos	cfs	μmhos	cfs	μmhos	cfs	μmhos	cfs	μmhos	cfs	μmhos	cfs	μmhos	cfs	μmhos	cfs	μmhos
1																					15	20148	3	22521
2																					14	19578	2	23582
3																					12	19923	14	19965
4																					9	20849	18	20579
5																					9	20900	11	24562
6																					7	20974	10	24556
7																					7	21636	9	23100
8																					6	21301	9	23245
9																					6	22021	8	24745
10																					4	22392	8	25000
11																					4	22451	8	25454
12																					4	22225	9	25457
13																					4	21678	9	26146
14																					4	22327	7	26197
15																					39	27734	7	26096
16																					14	9620	8	25002
17																					6	13725	7	24624
18																					4	16365	7	25296
19																					20	15705	8	26525
20																					18	15014	11	25829
21																					7	18269	6	25230
22																					6	18824	5	25242
23																					5	18686	5	26000
24																					4	18725	5	26746
25																					4	21121	5	26438
26																					3	21800	6	26375
27																					3	21850	6	26800
28																					3	22708	7	26250
29																					3	24000	6	24949
30																					3	24000	7	25000
31																					3	23462		
Avg.																					8	20201	8	24598

DAILY FLOW AND CONTINUOUS RECORDED QUALITY DATA

PNS Station No : 771
Location: North Fork of Wichita River near
Water Year: 1962 Paducah, Texas

Basin: Red River
Tributary to: Wichita River
Remarks: Records very good.
Stratification nil.

Equations Used to Compute Constituents--
Chlorides: Log Cl =1.1380 Log Sp.C.-1.1025
Sulfates: SO_4=0.1007 Sp. C.
Dissolved Solids: DS =0.6942 Sp. C.

Discharge (cfs) and Specific Conductance, Micromhos/cm (μmhos)

Day	October		November		December		January		February		March		April		May		June		July		August		September	
	cfs	μmhos	cfs	μmhos	cfs	μmhos	cfs	μmhos	cfs	μmhos	cfs	μmhos	cfs	μmhos	cfs	μmhos	cfs	μmhos	cfs	μmhos	cfs	μmhos	cfs	μmhos
1	7	25000	14	19326	13	21925	13	20950	11	21550	10	22276	7	25002	6	27102	23	28541	8	22190	16	16536	4	26522
2	11	25548	42	14524	12	21951	13	21438	11	21400	13	22242	7	24720	6	26804	18	28602	7	23062	207	4283	21	21167
3	9	26229	12	16153	12	21800	13	21750	11	21825	13	21555	8	24589	6	26656	10	24768	7	23902	32	5766	46	15437
4	8	25879	9	17855	12	22121	13	21425	11	21648	12	21541	10	25459	6	27163	10	24517	7	23577	15	10701	7	9178
5	7	24951	8	20662	12	22225	19	19720	10	22000	12	22550	20	24432	6	26869	210	3000	7	24427	10	15276	7	14950
6	7	24875	8	21862	12	22000	15	19099	11	21597	12	22350	12	24809	6	27750	181	5000	6	25852	8	18078	17	20159
7	7	24729	8	22975	12	22326	14	20624	11	21800	12	22200	10	25000	6	28512	38	8000	6	25751	7	19457	9	23069
8	7	24097	8	22425	15	21847	14	21562	11	21950	12	22450	8	25130	23	19658	13	11000	6	25647	6	20979	6	21999
9	22	20884	8	21925	14	21729	10	20679	11	21750	12	22050	7	24623	13	21272	106	4000	6	26233	6	22370	5	23148
10	15	20675	8	22050	12	21500	8	20733	11	21900	12	21681	7	25525	7	21900	76	8000	7	25950	5	23069	4	24668
11	7	21000	8	21900	13	21425	7	20669	11	21400	10	22060	7	25850	6	26562	195	3000	6	26290	5	23950	4	25675
12	7	21500	8	21750	11	21961	9	19628	11	21815	10	23175	7	25900	5	26976	151	2235	6	26760	5	24000	4	26740
13	7	22000	8	22350	12	21317	12	20296	10	22129	10	22949	7	26252	5	27301	79	3162	4	26684	6	24394	4	27327
14	7	22200	15	22617	14	21976	14	18368	10	22000	11	22854	6	26148	6	28951	16	9587	4	26896	7	24401	4	27200
15	7	22400	20	21627	14	22000	13	18658	10	22000	12	23426	6	26397	6	28949	12	15016	4	26552	6	24835	4	27200
16	7	22600	12	20573	16	22000	13	19183	10	22000	11	23002	6	26805	7	28396	10	18777	4	27588	5	25000	6	27000
17	8	22545	11	20843	15	22000	12	19502	10	21550	11	22800	6	26478	7	28000	9	20725	5	27574	4	25230	564	2860
18	8	22547	10	21475	14	21659	12	20553	10	21050	11	23025	7	26800	7	28000	8	22187	6	27114	4	25523	117	2311
19	8	22615	12	21500	13	21200	9	19998	10	21917	11	23351	7	26322	6	28000	10	21903	14	26902	3	25569	19	8352
20	8	22982	12	21958	13	21000	8	18990	10	23000	12	23153	6	25955	8	27820	8	21928	16	26467	2	26123	10	14884
21	7	22522	12	22400	13	21150	10	21004	11	23000	9	22880	6	26754	13	27894	7	21923	5	22531	4	25875	8	18333
22	6	22956	12	22000	13	21151	9	20042	10	23000	9	22561	6	27375	7	29319	7	22747	4	19045	3	25895	6	20071
23	6	22870	12	21950	12	21244	10	20428	11	23000	8	23524	6	27755	6	29320	7	23173	13	21797	3	26326	5	21101
24	5	23372	12	21875	12	21600	13	21495	10	23000	7	23525	16	26841	6	27250	6	23575	9	27278	3	26102	4	22572
25	5	23969	12	21600	12	21600	14	20342	11	23000	7	23850	13	28093	6	27929	6	24813	16	23294	3	26850	14	19815
26	5	24500	11	21699	12	21753	16	20005	11	22748	7	24388	11	25678	6	28959	15	25069	13	26248	3	26875	20	18096
27	6	23907	11	22289	12	21450	14	19131	11	22080	7	24350	18	23752	6	30000	124	2653	13	24063	3	26941	10	11608
28	7	23678	12	22449	12	21360	12	20208	9	21974	7	24173	11	25468	6	29909	14	8994	7	20225	3	26825	7	17891
29	7	23127	13	22275	13	20625	11	21371			7	24874	8	26566	5	29500	10	15177	84	11678	3	27000	6	20770
30	7	22145	13	21925	13	20856	11	21500			7	24948	7	26969	4	29871	9	20313	13	6833	3	27094	6	22462
31	8	21414			13	21225	11	21225			8	24876			5	29702			5	11827	3	26964		
Avg.	8	23018	12	20635	13	21614	12	20307	10	22072	10	22895	9	25750	7	26644	46	6533	10	20477	13	11088	32	7238

DAILY FLOW AND CONTINUOUS RECORDED QUALITY DATA

FHS Station No.: 500
Location: Cache Creek near Walters, Oklahoma
Water Year: 1961

Basin: Red River
Tributary to: Red River
Remarks: Records good. Stratification nil.

Equations Used to Compute Constituents--
Chlorides: Cl =0.0782 Sp.C.
Sulfates: SO_4 =0.1013 Sp.C.
Dissolved Solids: DS =0.6490 Sp.C.

Discharge (cfs) and Specific Conductance, Micromhos/cm (µmhos)

Day	October		November		December		January		February		March		April		May		June		July		August		September	
	cfs	µmhos	cfs	µmhos	cfs	µmhos	cfs	µmhos	cfs	µmhos	cfs	µmhos	cfs	µmhos	cfs	µmhos	cfs	µmhos	cfs	µmhos	cfs	µmhos	cfs	µmhos
1	17	797	128	454	25	753	305	456	48	812	69	880	800	342	34	870								
2	16	777	144	458	26	760	260	444	49	816	67	880	286	457	32	870								
3	16	609	131	463	27	760	120	440	48	825	61	884	173	498	33	855								
4	19	651	120	442	27	760	91	466	48	825	59	896	125	540	39	964								
5	19	682	97	450	26	752	207	583	54	1102	60	883	97	589	65	843								
6	24	615	68	445	26	740	175	710	191	790	57	877	82	623	67	787								
7	19	640	55	464	35	1150	123	736	163	646	53	875	74	669	48	749								
8	17	563	43	494	41	863	98	737	136	644	46	858	86	745	42	722								
9	16	630	33	520	126	707	77	784	192	650	45	845	206	591	35	717								
10	16	671	32	553	138	595	64	807	177	626	30	849	163	570	33	704								
11	15	664	32	560	620	327	61	798	133	622	25	863	119	622	34	738								
12	15	633	33	583	709	333	58	795	100	662	25	867	82	652	34	754								
13	17	623	33	622	362	448	56	786	78	702	25	895	68	641	31	753								
14	28	665	31	652	185	505	55	775	68	747	25	900	63	669	30	754								
15	141	587	30	675	130	542	56	775	67	795	25	900	60	695	29	767								
16	53	577	34	698	114	555	54	778	64	801	24	892	56	715	27	780								
17	25	553	36	700	101	565	80	764	63	840	144	854	53	744	29	805								
18	1087	141	36	707	87	606	96	730	60	850	763	390	54	750	1014	460								
19	6017	159	31	720	78	716	64	726	60	843	448	358	52	750	293	452								
20	3049	205	29	713	75	800	52	730	60	852	148	416	49	750	105	519								
21	982	221	28	724	70	790	50	741	60	998	101	470	46	751	78	582								
22	778	213	27	748	67	776	48	751	139	899	77	533	43	762	61	630								
23	662	205	26	740	63	776	45	774	142	812	62	587	40	767	52	675								
24	583	208	29	743	49	780	45	777	101	741	53	614	38	792	46	705								
25	487	236	29	750	41	780	47	758	95	725	51	877	36	800	47	670								
26	412	279	28	750	37	780	44	750	91	723	52	1141	35	815	45	723								
27	451	314	29	750	41	789	44	750	81	794	54	787	33	839	54	747								
28	270	323	30	753	43	800	41	751	74	874	50	750	33	863	62	719								
29	177	372	26	760	47	939	46	760			45	800	35	864	49	720								
30	142	395	25	758	64	718	48	785			232	640	33	858	41	672								
31	149	422			93	886	44	806			951	364			37	710								
Avg.	507	210	48	562	115	536	86	654	94	757	127	541	94	559	85	591								

DAILY FLOW AND CONTINUOUS RECORDED QUALITY DATA

PHS Station No.: 497
Location: Red River near Burkburnett, Texas
Water Year: 1961

Basin: Red River
Tributary to: --
Remarks: Records poor. Stratification nil.

Equations Used to Compute Constituents--
Chlorides: Log Cl =1.1381 Log Sp.C.-1.1371
Sulfates: SO_4=0.1385 Sp.C.
Dissolved Solids: DS^4=0.6906 Sp.C.

Discharge (cfs) and Specific Conductance, Micromhos/cm (umhos)

Day	October		November		December		January		February		March		April		May		June		July		August		September	
	cfs	umhos	cfs	umhos	cfs	umhos	cfs	umhos	cfs	umhos	cfs	umhos	cfs	umhos	cfs	umhos	cfs	umhos	cfs	umhos	cfs	umhos	cfs	umhos
1	319	6700	2319	5570	410	7720	1060	8800	514	8700	872	8200	1171	7000	360	6400	111	8092	516	7000	275	7000	59	7600
2	227	7700	2088	5960	392	7850	1099	8600	562	8500	787	8200	920	7200	378	6100	98	8255	347	6900	201	7200	49	7800
3	177	7800	1958	6310	407	7800	1116	8200	640	8400	675	8200	928	7200	438	5000	96	8712	271	6800	170	7400	49	8000
4	224	6562	1824	6680	414	7950	1079	8500	731	8300	585	8200	1060	6800	451	5800	398	7332	218	6500	159	7435	160	6500
5	616	4784	1708	7050	412	8100	981	8800	870	8200	511	8200	1045	6700	713	5212	2891	4022	198	6200	147	7470	509	4500
6	446	6172	1579	7420	398	8150	917	8700	920	8000	466	8200	1030	6600	633	3500	11776	1941	181	6100	154	7500	890	3000
7	309	7011	1444	7790	775	6000	888	8800	993	7800	431	8200	1016	6700	552	4250	16192	1320	143	6000	130	7550	476	3200
8	238	7144	1328	7680	1254	5600	863	8800	1018	7600	412	8300	982	6700	678	4800	5746	1951	104	5900	111	7600	360	3400
9	180	5555	1206	7550	688	6200	831	8900	964	7700	417	8400	966	6800	439	5250	6725	2732	95	5800	102	7400	242	3600
10	153	6695	1120	7420	1028	5500	812	8900	923	7800	434	8400	839	6800	354	6100	8946	1579	144	6200	96	7200	171	3800
11	131	6665	1048	7290	2094	4700	768	9000	982	7900	442	8500	768	6900	370	6541	4490	1700	1116	7500	88	7000	130	4000
12	126	6944	1015	7160	1254	5100	715	9100	878	8000	441	8500	780	6900	287	5592	2390	1611	1460	9000	85	6800	191	3600
13	2978	3991	966	7030	997	5200	636	9300	888	8100	431	8600	801	6900	215	5350	2369	1843	2134	5965	82	6962	1579	2000
14	12433	3519	945	6900	1706	4600	589	9500	881	8000	439	8600	782	6900	159	6254	2846	1805	2295	5603	81	7007	1167	2200
15	6808	2137	912	7000	2002	4450	574	9700	786	8000	430	8700	625	6900	120	6400	3681	1700	2433	5979	102	7366	566	2000
16	4478	2308	882	7100	1671	5600	550	9800	839	8000	453	8800	551	6900	105	6500	3296	1800	6143	4480	110	7285	757	1800
17	7905	3242	774	7200	1709	6200	553	9800	828	8000	910	6500	494	6900	104	6400	2738	2000	9170	3650	179	5730	764	1850
18	25322	1515	715	7300	1736	6800	581	9400	726	7900	3677	5600	467	6900	431	5300	2219	2200	6244	5100	181	4682	339	2000
19	49315	2183	695	7400	1643	7400	639	8800	690	7800	2825	5800	446	7000	430	3500	1634	2400	2549	5400	179	5600	215	3000
20	42250	1840	706	7500	1355	7525	619	8600	633	7600	1879	6100	400	7200	477	5101	1045	3200	1436	5535	159	6200	165	4000
21	26175	2100	681	7600	1293	7650	587	8200	760	7800	1551	6500	346	7400	618	5777	759	5000	742	5381	210	6500	135	4800
22	16613	2400	655	7575	1225	7775	522	8000	851	7800	1370	6400	308	7450	1009	5264	524	6200	8050	1326	281	6600	110	5200
23	11088	2700	606	7550	1116	7900	528	7800	911	7500	1665	6600	280	7800	1269	7011	396	6800	3445	1858	488	6800	92	5600
24	5992	3200	554	7520	989	8000	568	8000	900	8000	1265	6700	253	8000	763	5800	327	7200	3749	3917	454	5200	76	6100
25	8170	2650	486	7490	967	8100	510	8200	950	8200	1234	6800	221	8200	455	5950	758	10000	2590	5052	291	6000	63	6600
26	6922	3100	473	7560	920	8200	483	8300	998	7600	1193	6952	213	8400	329	5800	2044	8800	1859	4600	184	6300	58	7000
27	6161	3630	479	7630	930	8300	365	8600	927	8200	1085	7000	209	8500	237	5850	2928	9000	1382	5000	128	6500	1021	2800
28	3856	4000	486	7600	920	8400	358	8600	917	8300	888	7200	205	8300	206	6000	2585	9500	999	5200	108	6800	710	2500
29	3710	4350	450	7500	967	8500	387	8500			755	7400	203	8100	162	6600	1364	8000	783	5600	89	7000	389	2600
30	3527	4250	436	7610	969	8600	424	8500			938	7000	204	7800	131	7200	903	7000	615	6000	73	7200	229	2700
31	2919	5200			976	8700	473	8600			1380	6800			122	7600			464	6300	66	7500		
Avg	795	2691	1017	7023	1067	6728	682	8744	832	7967	974	6933	618	7019	424	5526	3010	2871	1931	4359	167	6604	391	2875

DAILY FLOW AND CONTINUOUS RECORDED QUALITY DATA

PHS Station No.: 497
Location: Red River near Burkburnett, Texas
Water Year: 1962

Basin: Red River
Tributary to: --
Remarks: Records poor. Stratification nil.

Equations Used to Compute Constituents--
Chlorides: Log Cl =1.1381 Log Sp.C.-1.1371
Sulfates: SO_4=0.1385 Sp.C.
Dissolved Solids: DS =0.6906 Sp.C.

Discharge (cfs) and Specific Conductance, Micromhos/cm (μmhos)

Day	October		November		December		January		February		March		April		May		June		July		August		September	
	cfs	μmhos	cfs	μmhos	cfs	μmhos	cfs	μmhos	cfs	μmhos	cfs	μmhos	cfs	μmhos	cfs	μmhos	cfs	μmhos	cfs	μmhos	cfs	μmhos	cfs	μmhos
1	193	2800	84	6800	299	8000	195	7588	377	7469	131	8182	69	9588	2028	6184	1960	1452	840	5956	1030	7438	61	6749
2	191	2900	287	6000	295	8000	201	7855	356	8784	152	8033	64	9595	1331	5528	1835	1240	665	5980	1438	7050	110	6205
3	169	3000	4091	2600	286	7950	209	7824	314	9450	180	8400	60	9339	950	5550	2958	1755	536	6542	3416	3889	77	4480
4	139	3200	7603	1800	276	7900	210	7724	282	9350	155	8399	65	8997	683	5500	2814	1753	450	7004	3170	4829	75	5383
5	122	3500	4863	2000	275	7662	193	8039	211	9261	136	8855	124	8029	510	5718	1940	1936	372	7756	1856	3904	78	5463
6	116	3800	2503	2400	275	7613	194	7856	209	9125	129	9000	143	7687	384	5775	1421	2015	320	7737	1140	3672	175	5319
7	109	4000	1602	2800	279	7592	204	7759	207	8976	128	8778	151	7763	319	6102	3609	3441	280	7627	805	3766	342	4672
8	100	4300	1161	3200	308	7500	201	7858	197	8551	130	8198	151	7787	269	6531	8787	2609	242	7513	615	3922	570	3777
9	110	5000	975	3500	337	7650	155	7681	203	8551	146	8334	158	7898	224	7020	18360	2019	217	7557	510	4084	601	2850
10	200	5200	810	4000	331	7800	129	9201	201	8575	162	7847	171	8327	190	7270	18308	1767	198	7501	431	4360	372	2929
11	140	5000	686	4500	309	7950	105	9400	195	8500	167	7621	172	9375	161	7844	13183	2800	188	7476	367	4571	227	4145
12	1506	2100	604	4800	214	8000	115	8200	190	8517	151	8962	182	11182	139	8096	11213	2382	190	7476	301	4827	176	5443
13	1808	1800	544	5200	193	8106	156	8300	189	8500	135	9126	175	12848	126	8497	8958	2397	171	7405	266	5180	139	5787
14	934	1900	519	5425	203	8152	180	8400	187	8400	122	9196	154	12881	117	8915	6363	2255	155	6651	210	5546	184	6637
15	474	2000	597	5209	221	8527	204	8000	197	8401	116	9399	137	12153	104	9172	6589	2020	153	6550	182	5849	129	7060
16	325	2200	661	5022	320	8666	244	7500	207	8651	127	9375	135	11792	94	9523	5294	2127	203	7115	169	5900	125	5022
17	248	3000	621	5533	354	8763	244	7573	206	8376	118	9326	124	11379	86	9663	10403	3110	250	8688	150	5974	520	2506
18	198	3600	839	6331	347	8122	200	7498	199	8224	114	9300	115	9838	82	9737	6339	3101	251	9483	126	5805	3090	2650
19	161	4200	939	6292	331	7849	154	7640	165	8463	110	9288	108	8601	80	9763	6824	3011	192	7635	103	5674	2492	3197
20	145	4550	863	6803	373	8454	133	8400	157	8538	157	8071	99	8524	79	9708	16283	4702	171	7475	90	6040	2638	2667
21	129	4900	707	7574	380	7796	133	8900	150	8712	162	8376	87	8895	142	8452	8964	5494	180	7804	84	6248	2625	2871
22	114	5250	684	7790	328	7961	154	9200	147	8563	153	8449	72	9073	116	6584	5341	4723	198	8812	74	6474	5696	2254
23	100	5600	710	6247	296	8358	217	9600	146	8662	145	8660	73	9242	268	8933	4333	4575	242	8348	65	6279	3081	2328
24	92	5950	522	6510	271	8493	288	8737	1.5	8550	129	8550	213	7586	236	6186	3618	4325	381	7263	57	6446	1838	2239
25	81	6300	460	6750	257	8600	383	8085	153	8500	103	8476	293	7186	164	7012	2645	4083	298	4630	53	6749	1723	1444
26	70	6650	415	8000	237	8750	455	8242	149	8584	96	8513	275	7662	1380	5035	1938	4359	2081	6920	53	6875	2784	1821
27	70	6700	378	8500	219	8332	484	8000	137	8305	91	8896	578	6495	1071	2426	1495	4473	2752	5857	53	7119	3430	3055
28	72	6800	365	8276	213	8265	507	8025	123	8329	82	9785	3643	4948	587	2008	1460	4774	2010	4280	53	7450	1971	4634
29	70	6900	339	8150	209	8150	742	7582			68	10200	6058	5362	346	2120	1584	4948	1326	4161	51	7600	1398	4400
30	66	7000	318	8050	205	7689	658	6001			67	10050	3912	6935	1739	3472	1123	7151	1355	3420	51	7500	886	4568
31	69	7000			198	7469	463	6524			70	9937			1735	1848			774	3562	56	7147		
Avg.	268	2940	1192	3700	279	8067	262	7820	200	8612	127	8706	592	6436	508	4950	6198	3010	569	5910	549	4826	1254	2890

DAILY FLOW AND CONTINUOUS RECORDED QUALITY DATA

PHS Station No.: 750
Location: Pease River near Vernon, Texas
Water Year: 1961

Basin: Red River
Tributary to: Red River
Remarks: Records poor.
Stratification nil.

Equations Used to Compute Constituents--
Chlorides: Log Cl =1.2327 Log Sp.C.-1.5190
Sulfates: Log SO_4=0.7967 Log Sp.C.-0.0260
Dissolved Solids: DS =0.6752 Sp. C.

Discharge (cfs) and Specific Conductance, Micromhos/cm (μmhos)

Day	October		November		December		January		February		March		April		May		June		July		August		September	
	cfs	μmhos	cfs	μmhos	cfs	μmhos	cfs	μmhos	cfs	μmhos	cfs	μmhos	cfs	μmhos	cfs	μmhos	cfs	μmhos	cfs	μmhos	cfs	μmhos	cfs	μmhos
1	4	9000	83	11000	20	10382	77	10135	33	12500	115	8500	123	6838	10	12000	1	10518	33	8300	4	9500	0	-
2	2	9500	76	11500	20	9966	71	10148	28	12250	89	8766	67	8946	10	12000	1	10200	18	9300	3	9500	0	-
3	1	10500	70	10700	20	9653	74	10800	26	12344	69	9538	52	9698	10	12000	1	10000	9	9800	2	9009	3	4028
4	155	900	67	10539	20	9500	99	15000	46	12746	54	10467	46	12211	12	10619	1	10000	4	10800	2	8956	530	2011
5	186	2500	61	10750	20	9500	92	12757	88	12979	44	10679	43	12775	13	9900	20	8500	3	11500	1	9392	179	2291
6	63	6500	55	11100	21	9915	76	10128	108	9153	38	10200	44	13075	14	7500	110	1000	2	10800	1	9250	25	2997
7	33	7200	50	11200	38	9191	64	10000	89	9300	33	12000	42	13000	13	8500	156	3000	15	5000	1	9238	6	3562
8	22	7500	48	11500	42	8563	58	10307	83	10500	27	14200	97	8101	13	9685	190	6500	64	3500	.8	9331	2	4191
9	15	7600	45	11700	41	8654	54	11096	80	10573	24	13928	139	5958	10	10150	255	4927	56	3700	.6	9249	.8	4533
10	10	7800	42	11201	87	8010	52	11874	75	11074	22	13700	43	8530	7	11313	90	6043	263	7600	.4	8941	1	4756
11	8	8000	40	11201	110	8000	50	12498	75	11400	22	13602	41	10719	5	12523	123	9038	752	5386	.2	8772	4	7625
12	8	8500	36	11189	78	9000	50	13000	67	12500	20	12754	36	12097	4	11146	61	7414	1178	3500	.2	9095	20	7031
13	8	9000	35	11020	75	10200	48	13000	64	13750	19	12325	33	12334	3	12000	32	7500	1004	3318	1	8173	44	3273
14	73	4500	35	11044	66	11500	46	13000	59	14000	18	12425	30	12124	3	12000	24	8500	851	3300	2	7901	5	3998
15	1567	1200	35	11032	110	15079	45	13000	55	14200	16	12868	27	12076	3	12500	20	6993	628	3250	14	9037	2	5264
16	2123	1800	34	10597	123	12605	43	13000	52	14100	40	3500	26	12050	2	12500	17	7468	809	3500	54	6814	.7	6541
17	1454	1200	32	11001	114	8778	42	13000	46	14000	791	1400	24	12000	2	12500	16	8509	1374	4500	80	7511	.3	6914
18	13244	1200	31	11001	111	8490	41	13407	41	14000	855	1800	22	12000	2	11000	117	11500	667	3700	22	5774	.1	7489
19	7227	1250	31	11000	96	9000	38	13074	36	14000	472	3500	21	12000	3	10000	139	10500	201	3600	16	4871	.1	7763
20	2204	1400	30	11001	75	9250	36	13249	42	13600	252	5500	19	12000	5	9000	81	9500	66	3897	124	4293	.1	7650
21	1105	1700	29	11001	69	10300	32	13276	89	11500	179	8000	18	12000	7	8000	48	9400	258	2704	162	4944	0	-
22	722	2300	27	11002	63	10558	31	13101	106	10500	148	10000	16	12000	7	8000	31	9471	2100	1907	150	8071	0	-
23	503	3100	26	11391	60	10753	30	13075	100	9374	130	10222	16	12000	6	9000	18	9930	369	2690	43	6964	0	-
24	375	4600	27	12001	55	11209	27	12957	285	7000	117	10646	15	12000	6	11500	23	10300	127	2885	16	7006	0	-
25	310	6500	25	12001	50	11347	20	13000	245	7500	99	10800	14	12100	5	11493	454	1000	83	3865	7	7578	0	-
26	624	5800	25	12001	44	11501	16	13000	188	6200	87	11000	13	12700	5	11098	742	6106	61	6118	4	8424	0	-
27	256	6200	25	12000	42	12100	19	12000	169	7000	71	11000	13	11901	3	10569	396	5800	49	8659	2	8300	0	-
28	202	6800	21	12002	41	12800	21	11630	154	8200	61	11300	12	11774	2	10200	219	5800	29	12000	1	8584	0	-
29	163	7300	20	12001	43	13000	25	11500			74	12000	11	11775	2	10000	124	6086	14	11000	.5	9291	0	-
30	128	8000	21	11310	48	13488	30	12000			232	5507	11	12000	1	10000	58	6761	7	10800	.2	9016	0	-
31	101	9500			63	11459	35	12500			232	4722			1	10848			4	10560	.1	9193		
Avg.	1061	1709	40	11183	60	10424	47	12129	90	9844	144	5515	37	10006	6	10287	119	5790	358	3582	23	6353	27	2371

DAILY FLOW AND CONTINUOUS RECORDED QUALITY DATA

PHS Station No.: 759
Location: Pease River near Vernon, Texas
Water Year: 1962

Basin: Red River
Tributary to: Red River
Remarks: Records poor.
Stratification nil.

Equations Used to Compute Constituents--
Chlorides: Log Cl =1.2327 Log Sp.C.-1.5190
Sulfates: Log SO_4=0.7967 Log Sp.C.-0.0260
Dissolved Solids: DS =0.6752 Sp. C.

Discharge (cfs) and Specific Conductance, Micromhos/cm (μmhos)

	October		November		December		January		February		March		April		May		June		July		August		September	
Day	cfs	μmhos	cfs	μmhos	cfs	μmhos	cfs	μmhos	cfs	μmhos	cfs	μmhos	cfs	μmhos	cfs	μmhos	cfs	μmhos	cfs	μmhos	cfs	μmhos	cfs	μmhos
1	0	-	2	2900	5	12200	4	11360	6	13230	2	9473	1	8492	32	9199	131	1184	34	10318	225	5705	4	5195
2	0	-	516	1640	5	12075	4	11719	6	13210	3	9560	1	9859	18	10242	413	1779	30	11596	1109	1343	3	2739
3	0	-	166	1910	6	11829	4	11530	5	13667	3	10100	1	10379	9	10837	225	5995	21	15148	523	1461	2	3290
4	0	-	72	3908	6	11577	4	11591	5	13812	3	10253	1	10630	5	11000	225	8246	14	12376	95	2864	3	4604
5	0	-	25	9864	7	11744	4	11160	3	13987	2	10594	.5	10214	3	11000	646	5400	11	11864	33	4526	3	4218
6	0	-	10	13484	6	11790	4	11044	3	14069	2	10852	8	7623	2	11000	1924	3876	9	12169	8	7302	6	3705
7	0	-	6	10718	6	11754	5	10650	3	13790	2	10771	14	9066	1	11000	533	4070	6	12820	5	9610	34	2880
8	0	-	4	9040	10	10900	6	13331	3	13100	2	10525	28	10349	.6	11000	2228	2997	4	13691	3	9797	34	1706
9	.6	9500	3	8812	11	10984	7	13503	3	12858	2	10775	18	10470	.4	11060	9765	1204	3	13717	2	10000	17	4043
10	1.	5284	2	9010	10	11086	4	13180	3	12361	2	10788	13	12195	.2	11407	1449	3021	3	12504	2	10149	11	7913
11	.2	4849	2	9447	8	11331	2	13808	3	11991	1	11020	11	15344	.1	11527	1841	2185	2	11943	2	10033	7	9050
12	.1	6371	1	9421	6	12777	2	14322	3	11675	1	11095	9	16230	.1	12000	2421	3386	1	11223	1	9670	4	10061
13	0	-	1	9098	7	12750	3	12351	3	11563	1	10320	8	17293	.1	12475	1464	3658	1	11275	1	9744	2	10110
14	0	-	2	9155	9	12750	5	11425	3	11288	1	9973	6	16587	.1	12900	620	3909	36	5083	.2	9686	.4	10000
15	0	-	14	5517	9	12803	4	10782	3	11226	1	9952	4	15980	.1	12400	250	3977	3	6973	.1	9704	.2	10000
16	0	-	68	6045	10	12731	5	9130	3	11072	1	10254	3	15032	0	-	105	4675	1	10853	.1	9225	33	3010
17	0	-	37	5092	13	13182	6	9028	2	11111	1	10027	3	12991	0	-	45	5619	1	10654	.1	9590	3424	1561
18	0	-	23	8133	12	12505	7	10860	2	10651	1	9810	3	12840	0	-	20	6473	1	10259	.1	9600	720	3907
19	0	-	16	10272	10	12326	4	12458	2	10597	1	9172	3	12430	0	-	1076	4295	1	9650	0	-	273	4082
20	0	-	12	12830	9	13032	3	13303	2	10951	2	9231	2	12334	0	-	1027	3449	1	9760	0	-	97	4345
21	0	-	10	14948	9	12848	3	12435	2	10725	2	9595	2	12147	.1	11092	915	2857	1	11088	0	-	78	5146
22	0	-	10	14486	8	12744	5	12255	2	10325	2	9138	1	11825	73	11840	373	3799	1	8188	0	-	236	7957
23	0	-	9	14313	7	12976	9	12361	2	10650	2	8149	1	10767	61	10034	172	4340	5	7614	0	-	80	5718
24	0	-	8	14004	7	12931	10	10393	2	10187	1	9024	6	8907	27	9531	92	4591	7	7593	0	-	33	5101
25	0	-	8	13603	7	12935	14	9547	2	9924	1	9084	6	11515	11	9654	57	4675	1820	5356	0	-	795	1143
26	0	-	7	12977	7	13243	14	9994	2	9709	1	9200	15	11823	3	10000	42	5338	1903	3530	0	-	1351	3418
27	0	-	7	12950	6	12706	14	11209	2	9372	1	9323	785	3489	1	10000	35	7768	1209	3223	0	-	606	5105
28	0	-	6	13229	5	12672	12	11747	1	9558	1	9500	1363	1100	27	6229	32	10257	770	2366	0	-	402	6384
29	0	-	6	12878	5	12437	10	11681			1	10000	203	5000	128	1763	25	11059	1572	1215	0	-	197	7488
30	0	-	6	12512	5	12007	8	12716			1	10000	78	8600	13	2009	43	9980	561	4343	0	-	107	7086
31	0	-			5	11697	7	12990			1	9800			5	2612			448	6418	0	-		
Avg.	.1	6560	35	4016	8	12310	6	11450	3	12166	2	9934	87	3066	14	7201	940	2733	273	3706	65	2079	285	3111

DAILY FLOW AND CONTINUOUS RECORDED QUALITY DATA

PHS Station No.: 755
Location: Pease River near Childress, Texas
Water Year: 1961

Basin: Red River
Tributary to: Red River
Remarks: Records fair.
Stratification nil.

Equations Used to Compute Constituents--
Chlorides: Log Cl =1.2008 Log Sp.C.-1.3728
Sulfates: SO_4=0.0924 Sp. C.
Dissolved Solids: DS =0.7125 Sp. C.

Discharge (cfs) and Specific Conductance, Micromhos/cm (μmhos)

Day	October		November		December		January		February		March		April		May		June		July		August		September	
	cfs	μmhos	cfs	μmhos	cfs	μmhos	cfs	μmhos	cfs	μmhos	cfs	μmhos	cfs	μmhos	cfs	μmhos	cfs	μmhos	cfs	μmhos	cfs	μmhos	cfs	μmhos
1	5	27215	33	23669	7	32134	79	12006	61	22588	37	16865	26	23718	3	30143	1	26674	16	24121	1	23856	2	25644
2	4	27286	27	24119	7	31934	92	7906	56	21758	28	16724	21	23571	4	30763	1	26195	12	24848	1	23776	2	24444
3	4	27219	24	24568	7	31733	63	10066	34	19428	20	14049	19	25492	5	30480	83	5996	11	24262	1	23500	8	22000
4	37	16586	19	25016	7	31534	45	14881	28	18839	15	15583	15	25178	6	30682	87	11266	11	22213	1	23591	32	20000
5	12	15970	15	25467	7	31370	37	17107	30	19678	13	17553	10	26521	5	31850	24	22124	8	25501	1	23538	7	25000
6	6	21718	13	25920	7	29891	34	17924	20	21333	11	20324	10	26952	4	30211	243	8822	7	26382	1	23528	4	28574
7	4	25877	12	26002	7	28043	34	18125	18	22342	9	22200	12	26568	4	28827	115	10196	6	26257	1	23609	114	5704
8	4	26233	12	25085	9	27904	33	18398	21	24531	7	22200	12	26084	3	29644	113	12838	6	26248	1	23404	77	9463
9	3	26035	10	25000	10	25766	30	19043	22	23500	6	22200	9	27712	3	28378	198	8534	534	9000	1	23476	11	22243
10	3	27627	10	24686	19	22264	28	20316	25	22668	5	22200	7	28000	3	29252	52	20409	1236	4500	1	23570	7	26796
11	3	28521	10	24750	23	20827	27	21050	26	19651	6	22200	5	29000	3	29327	30	26777	269	4000	176	7550	5	27976
12	298	4158	9	24750	38	20700	27	21400	19	17141	6	22200	4	30000	3	28698	20	28936	1399	3000	120	7500	18	26966
13	41	5211	9	23699	108	16800	27	20920	13	18071	5	24428	4	29762	2	28868	16	29781	853	5000	56	11500	19	25725
14	15	10566	8	23023	104	14500	29	19852	10	25888	5	25337	4	30242	2	27400	16	28748	301	8000	56	11000	6	29330
15	29	15562	8	23986	95	15000	27	19192	9	26834	4	25098	3	30000	2	27420	87	17972	1062	3500	254	6400	4	29166
16	2505	3010	7	23535	87	15500	22	20430	8	26640	22	24470	3	30000	3	28473	379	10636	1235	3000	46	11276	4	28799
17	1180	3600	7	23188	56	16000	20	22988	6	27000	289	24000	4	30000	4	28095	217	8207	362	5000	22	21067	3	28597
18	9737	2225	7	23369	43	15800	18	23518	5	26000	204	21033	3	29929	4	28751	91	10523	102	6500	13	24795	3	28001
19	2379	3200	7	23176	39	15200	14	24284	3	25000	104	12049	3	29801	18	24059	48	15264	37	11000	12	25000	3	26438
20	876	5000	7	22059	34	13946	12	25146	9	24000	82	13437	3	29525	7	26871	21	20801	17	18000	611	6500	3	29666
21	441	6500	7	22776	29	13432	10	26416	47	22060	94	13800	3	29300	3	29457	17	24110	11	19000	80	9500	2	29649
22	309	7800	7	22517	26	14318	10	26052	184	8150	68	10897	3	29424	2	29488	16	25498	12	20000	23	15779	2	26791
23	258	9500	7	22163	25	15221	9	27206	206	6000	47	12565	3	29394	2	28240	15	26109	57	15000	8	21197	2	25670
24	238	10500	7	22966	23	16004	9	27702	146	7000	38	11934	3	29838	2	27681	17	25279	75	18000	5	20266	2	25129
25	154	11000	7	23381	23	17720	8	26800	112	8500	33	7200	2	29636	5	31365	1284	3952	27	19000	3	18763	2	25125
26	110	11000	7	23552	24	19380	7	27801	82	11000	29	9720	3	29209	4	32171	367	6000	12	20200	3	23012	1	25067
27	113	12000	7	23244	23	20741	6	28484	65	13000	23	20240	3	29825	2	29386	211	10115	6	21000	3	22270	1	25904
28	131	11300	7	25425	20	21080	7	28323	49	14512	19	25083	3	30001	2	28136	71	14396	4	21000	3	23588	1	25743
29	205	9500	7	32500	19	21799	6	28241			19	26000	3	29947	2	25829	41	19446	3	22602	3	25017	2	26074
30	42	13000	7	32333	21	18282	8	28221			26	25435	2	29916	2	26065	25	22447	2	22681	2	24553	2	28313
31	37	19000			47	15272	12	25206			31	24976			2	27338			2	23119	2	25147		
Avg.	619	3568	11	24539	32	17306	26	17527	47	13216	42	18288	7	27113	4	28466	130	8912	248	5013	49	8405	12	17409

DAILY FLOW AND CONTINUOUS RECORDED QUALITY DATA

PHS Station No.: 735
Location: Pease River near Childress, Texas
Water Year: 1962

Basin: Red River
Tributary to: Red River
Remarks: Records fair.
Stratification nil.

Equations Used to Compute Constituents--
Chlorides: Log Cl =1.2008 Log Sp. C -1.3728
Sulfates: SO_4=0.0924 Sp. C.
Dissolved Solids: DS =0.7125 Sp. C.

Discharge (cfs) and Specific Conductance, Micromhos/cm (μmhos)

Day	October		November		December		January		February		March		April		May		June		July		August		September	
	cfs	μmhos	cfs	μmhos	cfs	μmhos	cfs	μmhos	cfs	μmhos	cfs	μmhos	cfs	μmhos	cfs	μmhos	cfs	μmhos	cfs	μmhos	cfs	μmhos	cfs	μmhos
1	2	26915	8	29361	4	33967	6	33000	4	34116	4	34825	3	35252	3	34275	344	7350	23	25538	75	15000	2	27872
2	2	27000	120	14228	4	31798	6	33620	4	35116	5	37000	3	34352	3	34195	139	6008	23	13634	32	20000	4	25678
3	2	27000	29	17448	5	32584	6	34340	4	36625	4	37000	3	34676	3	34200	20	19316	8	20917	16	25000	11	32827
4	2	27450	14	24497	5	32925	6	34011	4	36002	4	38038	5	35406	3	34049	49	11850	5	32276	10	30000	5	33261
5	2	27283	10	28554	5	34312	8	33111	3	35239	4	36863	22	36514	3	33803	1175	12500	3	38198	7	31000	7	30276
6	2	27183	7	31449	5	33303	7	34252	4	35000	4	34900	9	37095	2	34000	1138	5500	3	40000	6	31000	21	32841
7	2	27287	6	32709	6	32485	6	33814	4	35000	4	35000	14	31566	2	33765	689	2000	2	39772	5	30000	13	34959
8	2	27142	5	32642	6	33500	5	33911	4	35000	5	35000	10	27820	2	34437	1480	3500	2	36524	4	30000	8	35278
9	15	16785	6	32750	7	33500	3	31464	4	35000	5	35000	6	30530	17	23704	2302	3000	7	24052	4	30185	6	34040
10	10	28535	5	32966	6	33500	2	28467	4	35062	4	25000	4	33482	4	25366	1206	5500	7	27124	4	32618	6	31996
11	4	31148	5	33000	5	33500	2	28526	3	35429	3	35000	3	35374	2	31633	1636	4000	4	21157	3	33000	5	33283
12	3	29179	4	32395	4	33500	4	28584	4	35834	3	35390	3	35250	2	32596	1810	3200	12	24867	3	33000	4	33515
13	3	29215	4	31609	5	33927	5	31869	3	35251	3	35000	3	35325	1	31625	921	5000	3	29215	5	30388	3	33000
14	3	28530	7	30845	7	34006	7	26912	3	35749	3	34501	3	35197	1	21060	349	6346	2	30000	5	32796	3	33000
15	3	27733	29	31092	7	33933	6	26395	4	35123	4	35000	2	35130	2	32258	110	6854	2	30250	3	31353	3	32875
16	3	28831	13	32568	10	33485	6	32906	3	35000	4	35000	2	35050	2	33590	43	11569	2	30753	3	30146	18	9300
17	3	29233	8	33854	12	32432	6	32771	3	35125	4	34753	2	35949	2	34873	18	18718	2	31334	3	29128	1256	3800
18	3	29125	8	33648	9	32983	5	33799	3	35875	4	34000	3	35951	2	35000	451	5000	2	32000	2	29000	136	7999
19	2	28569	7	33620	8	33841	4	31948	3	36134	4	35103	3	36000	1	35000	1690	3800	4	33398	2	29000	42	18072
20	2	28801	7	33819	7	33301	3	31021	4	36624	5	35868	3	36000	274	2354	693	4200	7	29000	2	29053	425	4000
21	3	29085	7	34099	7	32796	3	30483	4	35252	4	37144	2	36000	151	4602	144	8000	41	11000	2	28752	157	4850
22	3	29184	7	34063	7	32932	4	29662	3	35000	3	35253	2	36000	14	21641	58	13000	9	22000	2	29000	51	9000
23	2	28843	7	34436	6	32960	5	30028	3	35000	3	35000	2	36012	6	29148	33	18000	20	12000	2	29000	17	15000
24	2	28066	6	34500	6	32218	8	33861	3	35128	3	35000	14	33479	3	32349	26	21000	1163	2725	2	28750	8	25000
25	2	29266	5	34620	6	32570	7	33722	4	36009	3	35000	13	33584	2	33247	23	24000	1612	1570	2	28349	746	4832
26	2	28839	5	34629	6	33473	8	35009	4	36563	3	35000	119	6376	2	32433	20	27520	554	2500	2	28200	611	7291
27	2	29277	4	34564	6	32948	7	35000	4	35131	3	35250	166	11095	2	31831	19	27000	201	4000	2	28898	218	8757
28	3	31007	4	33500	6	32000	6	34669	3	33918	3	35253	34	21898	2	32968	30	22296	205	5000	2	29820	84	15643
29	3	31101	4	33567	6	33041	9	32455			3	34252	10	31691	1	33827	25	19002	250	8000	2	28750	32	21606
30	2	30619	4	33883	6	33875	7	31329			3	34203	5	33018	1	33286	17	20291	278	6500	2	28320	21	23149
31	3	31974			6	32925	6	33729			3	35550			1	32405			139	12000	2	28175		
Avg.	3	26964	12	24769	6	33176	5	32388	4	35368	4	35384	16	18029	17	7788	555	5033	149	4002	7	23183	130	6649

DAILY FLOW AND CONTINUOUS RECORDED QUALITY DATA

PHS Station No.: 490
Location: North Fork of Red River near Headrick, Oklahoma
Water Year: 1961

Basin: Red River
Tributary to: Red River
Remarks: Records poor. Stratification nil.

Equations Used to Compute Constituents--
Chlorides: Log Cl =1.2890 Log Sp.C.-1.7093
Sulfates: SO_4 =0.1206 Sp.C.
Dissolved Solids: DS^4=0.6590 Sp.C.

Discharge (cfs) and Specific Conductance, Micrombos/cm (µmhos)

Day	October		November		December		January		February		March		April		May		June		July		August		September	
	cfs	µmhos	cfs	µmhos	cfs	µmhos	cfs	µmhos	cfs	µmhos	cfs	µmhos	cfs	µmhos	cfs	µmhos	cfs	µmhos	cfs	µmhos	cfs	µmhos	cfs	µmhos
1	32	6127	670	3450	165	6628	396	3851	209	7089	287	3486	299	4361	150	7030	52	7500	134	4776	76	5026	44	6331
2	26	7026	357	4300	159	6643	389	3871	272	7085	184	3822	395	3967	220	3243	53	7462	113	5237	69	6109	42	6636
3	23	7500	276	4535	155	6688	397	3950	294	5830	149	5040	431	3906	192	5745	72	6622	175	4527	64	6895	55	5759
4	23	8218	258	4883	159	6600	398	4050	360	4587	138	5958	529	3417	179	5220	1145	1947	196	2462	61	6900	121	3515
5	19	9388	239	4944	167	6689	394	4249	388	3640	115	6274	493	3076	136	3915	6326	1588	100	4088	60	6626	295	3351
6	19	9676	242	4900	181	6737	424	4163	371	343	111	6528	476	3000	108	4503	5028	1013	85	4803	71	6454	168	1875
7	16	10177	225	4879	210	6368	506	3541	372	3625	112	6751	351	2508	190	5268	4076	1246	80	5431	71	6400	106	2832
8	15	10452	199	4841	219	5700	474	3400	360	3759	103	7198	273	2597	222	3413	5808	1390	74	5478	87	6442	109	2480
9	15	10309	441	4663	213	5209	406	3583	358	3006	111	7477	326	3268	172	3197	11035	1532	84	5500	64	6953	70	4200
10	14	10608	450	4253	238	5187	275	3800	359	3142	105	7242	383	2752	164	4523	4135	1410	110	5269	59	6664	293	6000
11	12	7569	438	4251	256	4917	221	4440	367	4294	101	6900	439	4110	102	4848	2858	1762	106	5476	59	6006	153	3600
12	1465	2469	352	4323	283	4872	210	5200	395	4174	102	6851	323	2900	87	5464	2638	1937	129	6591	58	5143	119	3500
13	6196	1542	176	4759	376	4900	212	5050	538	3767	102	7149	265	4200	80	6531	2613	2056	240	5743	52	5427	225	3150
14	3213	945	166	6063	560	4184	223	4900	611	3188	106	7238	241	4600	72	6644	2830	2027	724	2270	56	5763	157	3850
15	1191	992	163	6780	689	3925	279	4540	557	2862	106	7516	224	4800	67	7319	2816	1968	227	3619	67	6437	113	4700
16	606	1526	171	6980	1062	2345	435	4200	361	2775	106	7354	220	4800	65	7789	2453	1964	127	3235	105	8440	98	5300
17	355	1847	278	5811	1164	2460	419	4103	324	3358	160	6634	190	5000	65	9346	1659	1962	98	3210	100	9638	83	6200
18	8956	997	286	4963	837	2820	404	3850	275	2566	508	4110	129	5100	119	8158	858	2291	81	4350	90	6728	74	7620
19	19029	1085	289	4972	790	2885	397	3850	262	2169	1106	2564	116	6500	374	2760	784	2572	67	5318	114	4127	69	7750
20	7426	1084	281	4906	699	2967	411	3831	285	3525	1039	3599	109	6540	820	2941	586	2745	58	5500	536	2165	68	7576
21	3044	1600	279	4991	451	3335	352	3691	302	3715	1140	2453	104	6812	815	2227	549	3150	80	5335	945	800	66	7290
22	2588	1962	275	5000	425	3713	286	4091	320	4115	975	2450	100	7099	266	2720	431	3184	680	2906	264	1075	62	7452
23	2383	2094	274	5169	396	3725	263	4859	357	4115	752	2848	97	7138	197	3672	294	3236	1216	1909	133	2453	59	7374
24	2200	2183	274	5166	385	3750	259	5008	375	4170	569	3112	94	7324	178	4234	276	3913	543	2591	97	3482	639	2556
25	1588	2162	272	5203	374	3918	254	5373	455	4214	446	3550	88	6751	137	4373	290	3837	417	4632	81	4137	2792	1312
26	3313	2130	258	5278	363	3987	240	5307	514	3354	278	4150	84	7164	94	3948	259	3671	202	5047	69	4570	963	1420
27	2914	2100	249	5102	369	4050	230	6312	491	3000	251	4725	84	7792	80	4851	351	3481	139	4270	61	5122	206	1600
28	1840	2250	164	5084	358	4118	223	5910	415	3000	233	5000	82	7327	74	5660	275	3303	126	4434	56	5632	164	2054
29	1164	2800	156	6417	366	4137	230	5250			243	4900	80	7596	70	6186	176	3634	110	4367	53	6199	153	2600
30	1049	3100	165	6991	373	3991	252	5870			269	4605	87	8155	66	6069	146	3694	104	5227	50	6686	137	3000
31	993	3250			406	4000	227	6213			274	4428			61	7227			86	5220	48	6592		
Ave	2314	1515	277	4903	414	3861	325	4217	377	3731	332	3874	237	4183	181	4078	2030	1733	217	3604	122	3739	249	2961

DAILY FLOW AND CONTINUOUS RECORDED QUALITY DATA

PMS Station No.: 490
Location: North Fork of Red River near Headrick, Oklahoma
Water Year: 1962

Basin: Red River
Tributary to: Red River
Remarks: Records poor. Stratification nil.

Equations Used to Compute Constituents:
Chlorides: Log Cl =1.2890 Log Sp.C.-1.7093
Sulfates: SO_4=0.1206 Sp.C.
Dissolved Solids: DS =0.6590 Sp.C.

Discharge (cfs) and Specific Conductance, Micromhos/cm (μmhos)

Day	October		November		December		January		February		March		April		May		June		July		August		September	
	cfs	μmhos	cfs	μmhos	cfs	μmhos	cfs	μmhos	cfs	μmhos	cfs	μmhos	cfs	μmhos	cfs	μmhos	cfs	μmhos	cfs	μmhos	cfs	μmhos	cfs	μmhos
1	108	3650	483	3968	106	6677	165	7412	99	7548	47	8048	40	8925	370	3638	293	2207	122	4250	107	5227	18	8099
2	129	4300	2820	885	107	6813	168	7665	90	7477	52	7456	40	9000	255	4323	1467	1797	100	4440	2466	3768	19	7494
3	128	4100	5660	932	112	7066	178	7669	86	7124	55	8403	39	8925	195	5019	1808	1000	83	5216	2424	1857	21	7165
4	127	4954	2681	890	121	6838	164	7425	84	7231	52	8685	40	8900	158	5565	662	2215	72	5792	819	1558	23	7499
5	110	6291	691	1119	132	6467	167	7622	82	7330	51	8238	43	8931	121	6169	386	3205	63	5302	384	1897	31	7221
6	93	6647	385	1592	138	6948	171	6863	79	7537	51	8706	48	8700	110	6833	339	2541	56	5594	243	2705	41	7388
7	85	6524	247	2158	135	6820	238	6385	79	8043	51	8721	53	8876	103	7632	2834	1218	48	5676	175	3480	50	6792
8	84	6017	157	2805	141	6485	194	6916	75	6995	51	9075	54	9077	97	8183	2485	1611	45	5907	131	4184	42	5959
9	131	4908	118	3421	139	6750	81	7204	65	7673	51	8963	56	10357	88	8651	2459	1676	50	6392	100	4610	33	6369
10	1790	1193	102	3893	134	6758	51	7739	62	8024	51	8667	59	10125	77	8564	10335	1476	50	6405	92	5581	201	4634
11	3073	420	90	4319	129	6819	51	8232	62	8030	50	8374	58	10464	71	8352	7038	1078	42	7048	83	5812	202	1851
12	718	393	80	4600	105	7400	88	7509	59	8398	50	8623	109	7872	65	8997	5063	1461	40	6992	74	5860	83	3029
13	289	782	73	4900	123	7800	116	6499	58	8375	50	8988	99	5638	57	9375	3875	1663	36	7416	65	5747	62	6425
14	146	1641	73	5251	160	5500	115	5987	58	8272	50	8563	80	6170	55	9651	4625	1340	50	7051	61	6879	44	9447
15	111	2453	108	5267	171	6254	112	6443	59	8250	50	9075	71	7643	51	9974	3750	1830	115	6857	56	7198	43	10207
16	90	3573	157	5408	162	6517	119	6515	59	8175	50	9022	66	8565	50	10117	4000	1837	79	10184	48	6946	38	8963
17	73	4887	421	6724	164	7017	135	6209	59	8175	48	9016	64	8187	48	10000	4250	1605	64	8609	43	6735	227	4409
18	61	5399	364	5298	171	7203	156	6357	61	8095	47	8817	62	8596	44	9825	2940	1884	133	5858	38	7050	2356	1254
19	58	5566	196	6033	181	7443	96	6999	59	7551	48	9072	61	7863	43	9496	2265	1931	127	3006	34	7648	2125	3504
20	54	5749	149	6338	182	7921	70	8180	59	7525	55	8315	59	8906	45	8490	2835	1811	87	4926	40	8019	619	2279
21	55	5966	125	5169	180	7619	62	8618	59	8256	51	8865	56	8969	60	7893	2889	1975	79	6445	42	8684	3886	2222
22	51	5911	110	5632	168	7249	68	8417	58	8500	50	8953	51	8576	48	9822	2679	2089	54	6078	35	9147	2816	1361
23	45	5775	106	5648	167	7300	97	8171	58	8500	50	8643	50	9118	40	11557	1928	2184	51	6266	30	10251	943	1245
24	45	5967	109	6003	169	7112	13	7357	56	8500	47	8675	61	8599	200	7824	1080	2327	59	5521	27	9601	439	1862
25	45	6188	95	5849	170	6629	138	6545	56	8500	45	8400	70	8423	195	5625	755	2390	289	3909	25	9399	340	2326
26	47	6636	82	6289	167	7071	159	6677	58	8425	44	8623	65	8049	75	6677	520	2552	2091	3628	23	8399	245	2886
27	44	7076	82	6482	164	7275	135	7683	55	9021	43	8827	811	6382	381	5959	284	499	1075	2991	23	8061	182	3299
28	48	6986	78	6500	166	7357	121	8625	49	8339	42	9232	3930	3395	2001	1750	248	2791	392	1786	21	8607	150	3797
29	40	6707	92	6595	175	7362	120	8976			40	8976	1403	2530	799	2142	189	3421	218	1873	20	9052	122	4667
30	47	6586	101	6336	171	7049	115	8431			40	9350	679	3463	669	1016	151	4055	148	3246	19	8527	97	5073
31	96	5701			167	7356	106	8203			40	8763			259	1345			114	4192	18	8340		
Avg.	259	1839	534	1826	150	7012	125	7279	66	7931	49	8710	279	4474	220	3938	2482	1653	194	3986	250	3252	517	2329

DAILY FLOW AND CONTINUOUS RECORDED QUALITY DATA

FRS Station No.: 733
Location: Elm Fork near Carl, Oklahoma
Water Year: 1961

Basin: Red River
Tributary to: North Fork of the Red River
Remarks: Records fair.
Stratification nil.

Equations Used to Compute Constituents--
Chlorides: Log Cl =1.2762 Log Sp.C.-1.6867
Sulfates: Log SO_4=0.2809 Log Sp.C.+2.0156
Dissolved Solids: DS =0.6718 Sp. C.

Discharge (cfs) and Specific Conductance, Micromhos/cm (μmhos)

	October		November		December		January		February		March		April		May		June		July		August		September	
Day	cfs	μmhos	cfs	μmhos	cfs	μmhos	cfs	μmhos	cfs	μmhos	cfs	μmhos	cfs	μmhos	cfs	μmhos	cfs	μmhos	cfs	μmhos	cfs	μmhos	cfs	μmhos
1	16	24838	74	10113	44	12726	47	11897	37	11801	30	12563	72	8926	43	13513	21	17463	14	17751	12	22730	9	48092
2	16	25969	70	9638	44	13056	43	14949	33	8965	30	13822	68	10100	43	18317	35	12610	14	18013	11	24392	9	51703
3	16	27125	69	9725	44	13500	40	13487	33	8975	30	14207	63	10199	44	10942	706	4612	14	18727	11	24208	9	48821
4	16	31010	70	9784	44	14500	39	13260	34	10892	29	13766	60	11101	47	15069	107	2500	14	18867	11	27136	11	56890
5	16	33000	72	9562	44	13500	41	12601	29	19298	29	14225	60	12213	49	12783	95	9500	13	19149	10	29512	11	35617
6	16	32003	70	10199	44	13380	41	2693	37	20125	29	14544	58	11551	41	12428	111	4200	12	22988	10	31650	11	36925
7	15	31006	69	10100	44	13008	41	12726	38	13503	29	14940	58	11200	36	13894	119	1870	12	22321	10	29316	11	43088
8	14	30003	72	10338	44	17000	40	11800	35	9728	29	14065	62	11419	34	11218	106	5076	12	20529	10	29360	12	32492
9	14	29000	72	9700	47	17000	39	12616	33	18000	29	14463	62	9495	32	12205	74	8793	13	24475	9	35272	12	29235
10	14	28000	70	10023	54	20000	41	13400	36	17500	29	14227	57	10483	29	15039	57	11554	14	15701	9	33959	11	34328
11	447	7000	70	10750	63	10000	41	13575	34	17000	30	13414	54	10515	28	15849	47	12368	13	16391	9	37248	11	33325
12	1210	2800	70	11000	59	9000	41	13525	33	16500	30	13553	52	8651	28	16000	40	12158	13	22246	10	35527	11	40050
13	144	1900	70	10775	54	10500	41	13575	29	16000	29	12884	51	9057	27	16500	35	12402	12	18860	16	14453	11	37975
14	85	1454	70	11225	53	11000	40	13550	28	15000	28	15225	51	10756	27	17000	33	12800	12	21742	12	24462	11	30359
15	106	1379	70	11946	54	11601	40	13403	28	14280	28	15913	51	11702	27	17500	32	13000	11	23580	12	23044	12	31412
16	105	1562	68	10421	52	11323	37	13526	30	14151	32	15749	49	9460	28	18000	32	13200	11	19259	12	22954	12	32528
17	468	1991	66	9999	51	11049	37	11776	29	12688	72	8618	49	10538	28	18150	32	13500	11	16430	11	25056	11	33978
18	1700	2407	64	10250	49	11280	35	10671	30	12922	88	1851	49	13037	29	16394	29	14000	9	21776	11	29388	11	32581
19	347	3483	62	10574	48	11420	34	9918	29	13150	71	2494	49	14349	36	14545	27	14500	9	26116	11	30524	11	35228
20	149	4600	58	10774	48	11546	34	13627	32	13496	73	4200	48	20000	33	12481	25	15000	8	26558	12	28663	13	31525
21	112	5000	56	11398	45	12108	34	14264	41	12787	68	5000	46	17000	28	15294	23	15929	58	9510	12	20213	11	24326
22	109	5203	54	11817	48	11811	37	16629	42	11078	62	7938	46	16000	25	16589	21	18394	291	4047	12	27191	11	32413
23	103	5600	52	11100	47	12349	38	12152	37	12142	58	7149	46	14000	23	17325	19	16768	42	5219	11	30706	11	38102
24	92	5600	51	11315	46	12415	38	13502	35	12847	57	7267	44	13000	23	16298	19	16467	21	10646	11	32681	10	35277
25	106	5700	51	11900	43	12689	31	33138	32	12055	58	7303	41	12500	26	18983	19	16671	18	15895	11	28811	10	33709
26	88	6786	49	11900	41	10662	32	39696	33	12023	56	7556	41	13194	25	15342	19	14723	16	16779	10	31215	11	29628
27	88	7388	50	11533	41	10850	32	37058	32	12251	53	8214	43	13019	24	14138	17	15101	16	19969	10	33888	11	34388
28	88	7573	48	12000	41	12025	33	14927	30	12917	54	9752	43	12721	24	14200	17	15051	13	21960	10	33367	11	32758
29	87	8572	45	12120	41	12669	30	16070			56	12100	43	12775	24	14663	16	16976	12	20821	10	37257	12	26338
30	80	9114	46	12870	42	13396	34	16242			65	11347	43	13244	23	16152	15	17784	12	22500	10	40076	12	36007
31	75	9493			48	13149	41	14516			73	9321			22	17307			12	22940	9	43727		
Avg.	192	4229	63	10752	47	12508	38	15224	33	13596	46	9427	52	11870	31	15036	65	7789	24	11994	11	28999	11	35642

DAILY FLOW AND CONTINUOUS RECORDED QUALITY DATA

PMS Station No.: 753
Location: Elm Fork near Carl, Oklahoma
Water Year: 1962

Basin: Red River
Tributary to: North Fork of the Red River
Remarks: Records fair.
Stratification nil.

Equations Used to Compute Constituents--
Chlorides: Log Cl =1.2762 Log Sp.C.-1.6867
Sulfates: Log SO_4=0.2809 Log Sp.C.+2.0156
Dissolved Solids: DS =0.6718 Sp. C.

Discharge (cfs) and Specific Conductance, Micromhos/cm (μmhos)

	October		November		December		January		February		March		April		May		June		July		August		September	
Day	cfs	μmhos	cfs	μmhos	cfs	μmhos	cfs	μmhos	cfs	μmhos	cfs	μmhos	cfs	μmhos	cfs	μmhos	cfs	μmhos	cfs	μmhos	cfs	μmhos	cfs	μmhos
1	12	32654	40	11146	19	20166	15	15167	14	20263	13	24452	14	19750	60	12860	32	29721	16	19385	2468	2351	6	36000
2	12	28778	60	7660	18	20125	15	19718	14	20058	16	17405	14	20560	50	13826	29	21088	14	19864	130	3504	7	39500
3	12	27164	28	10976	18	21025	15	17400	14	18213	19	19083	15	20214	42	14710	27	19658	14	22037	64	6246	8	38000
4	12	27985	21	15669	18	20562	16	20500	14	18275	18	25989	16	20614	37	14640	13	20378	13	24471	52	9002	8	36000
5	12	28150	17	16440	20	20802	21	20000	14	13575	17	21655	18	27069	34	14060	53	15418	14	30469	37	10913	8	35000
6	12	30081	17	18308	20	21078	28	22000	14	20367	17	20089	21	22922	27	15204	25	15904	17	28534	29	10441	8	34000
7	12	27194	16	21393	19	18216	25	16000	15	21196	18	21390	20	20198	26	17180	14	18757	11	24036	24	11904	8	33000
8	12	29048	16	23163	20	19873	18	16500	15	17375	18	20609	18	17147	25	17865	16	24076	10	27130	22	13116	39	18087
9	17	26211	16	23385	21	19170	17	33000	15	17000	18	17298	18	19529	21	18619	127	11562	9	28605	20	14395	38	8110
10	15	24315	16	21997	20	16278	17	40000	15	19214	16	19550	18	21231	20	18520	73	7386	9	29628	18	16348	15	15679
11	12	28893	16	21594	19	22398	17	40000	15	18332	14	20432	18	20734	18	19111	23	16661	10	30746	16	18206	11	18950
12	12	26489	16	21324	15	30000	16	39000	16	19375	14	19271	17	22222	16	17089	14	19192	11	28998	15	20909	10	22000
13	13	26912	16	19454	15	28000	18	23000	16	18349	14	21500	16	18626	14	18924	10	19585	9	22536	16	25197	9	24000
14	12	22996	18	25760	12	17200	23	16000	16	18250	14	20500	15	19187	12	20986	8	20203	7	34371	16	21301	8	23000
15	12	24190	25	19373	11	15000	20	15000	16	19963	14	20000	14	20979	12	21643	2642	5100	6	37452	14	22120	14	30000
16	12	23548	25	14777	13	17000	19	13908	16	18000	14	24000	14	22713	15	21365	174	5420	6	40309	55	9793	73	17000
17	12	26728	24	18469	17	19500	19	17092	16	20250	14	24500	14	24208	36	25068	82	6660	6	39764	19	5653	611	8000
18	12	27435	21	21379	17	18500	17	17619	16	20625	14	33000	14	21755	34	16433	57	8403	6	39663	11	13061	67	7300
19	12	28650	21	22144	17	17000	18	27513	16	21876	14	28000	14	22523	18	17049	55	9477	6	40488	9	19387	44	8730
20	12	32487	21	21750	16	19854	23	24416	17	28000	14	30000	13	23818	14	17537	44	11081	6	46000	8	26264	1610	2980
21	12	21131	21	22641	15	19697	20	23389	17	32000	14	27169	13	24438	13	17996	34	12035	7	39388	8	28530	150	2830
22	12	21334	21	22351	15	16994	17	21356	16	24000	14	20456	13	25125	14	19396	28	12923	10	24093	7	26596	68	4860
23	12	22375	20	20406	15	16267	17	11812	17	20000	14	20052	13	24250	10	20252	24	14512	40	15351	7	25018	54	6115
24	12	23587	19	20746	15	18829	19	15308	16	19000	15	23461	13	26144	10	22876	22	15344	612	4000	7	29180	42	7660
25	12	23188	19	18600	15	19913	21	10699	17	20000	15	29569	14	24074	11	25182	21	15714	230	2700	7	31065	60	8691
26	12	21629	19	19625	15	18952	25	9341	17	16500	14	26038	579	6129	9	23774	20	17383	54	9000	7	25948	47	8200
27	12	21712	19	20536	15	19687	19	10121	14	25600	14	27002	4471	2249	9	23546	19	18215	38	17000	7	27830	38	9000
28	13	15309	18	21615	15	19745	17	12909	12	26116	13	22446	223	4572	9	25536	19	17000	33	20352	6	30000	35	11000
29	13	17768	18	18724	15	22339	15	14224			14	23988	114	6931	8	21104	18	17407	32	20583	6	32000	31	13000
30	14	24879	19	19769	15	20821	14	17468			14	23563	79	10111	8	21142	17	19797	27	18694	6	33000	29	11000
31	15	23459			15	13867	14	19750			14	20846			7	24195			20	17189	6	35000		
Avg.	13	25317	21	18136	16	19670	19	20134	15	20433	15	22918	195	4215	21	17619	125	7272	42	10026	101	44/8	105	5911

DAILY FLOW AND CONTINUOUS RECORDED QUALITY DATA

PRIS Station No.: 754
Location: Elm Fork at Salton Crossing, Oklahoma
Water Year: 1963

Basin: Red River
Tributary to: North Fork of the Red River
Remarks: Records good.
Stratification nil.

Equations Used to Compute Constituents--
Chlorides: Log Cl =1.5831 Log Sp.C.-2.9227
Sulfates: Log SO_4=0.3986 Log Sp.C.+1.4405
Dissolved Solids: DS =0.7421 Sp. C.

Discharge (cfs) and Specific Conductance, Micromhos/cm (μmhos)

Day	October		November		December		January		February		March		April		May		June		July		August		September	
	cfs	μmhos	cfs	μmhos	cfs	μmhos	cfs	μmhos	cfs	μmhos	cfs	μmhos	cfs	μmhos	cfs	μmhos	cfs	μmhos	cfs	μmhos	cfs	μmhos	cfs	μmhos
1	16	6288	73	4311	44	5500	47	4531	37	5500	30	5350	72	4423	43	5788	21	8177	14	11295	12	8597	9	12743
2	16	5961	70	4500	44	5500	43	4740	33	5500	30	5438	68	4626	43	5970	35	7759	14	7930	11	9018	9	15789
3	16	6217	69	4550	44	5500	40	4869	32	5500	30	5513	63	4612	44	6000	706	2481	14	7345	11	9010	9	14970
4	16	6288	70	4600	44	5500	39	5014	33	5500	29	5381	60	4845	47	5825	107	2625	14	10643	11	8623	11	10296
5	16	6266	72	4650	44	5500	41	4830	29	5500	29	5388	60	4913	49	5047	95	2809	13	8296	10	8370	11	8417
6	16	6467	70	4700	44	5430	41	4875	27	5800	29	5369	58	4881	41	5077	111	3139	12	15555	10	9378	11	8392
7	15	6438	69	4750	44	5500	41	4750	38	5600	29	5594	58	4813	36	6386	119	2799	12	17141	10	9235	11	9232
8	14	7063	72	4685	44	5688	40	4737	35	5500	29	5650	62	4775	34	9058	106	2966	12	3270	10	9493	12	7868
9	14	6825	72	4500	47	5801	39	4894	33	5500	29	5488	62	4600	32	8571	74	3508	13	3081	9	10130	12	8111
10	14	6841	70	4500	54	5339	41	4812	36	4500	29	5625	57	4804	29	8227	57	4031	14	5112	9	10719	11	8626
11	467	1650	70	4500	63	4218	41	5004	34	4700	30	5613	54	4940	28	6231	47	4495	13	6876	9	10619	11	8475
12	1210	1700	70	4500	59	3978	41	5025	33	5000	30	5494	52	5127	28	6336	40	6543	13	8907	10	9266	11	9064
13	144	2600	70	4500	54	4379	41	5038	29	5206	29	5487	51	6106	27	6743	35	7451	12	4703	16	5068	11	8510
14	85	3200	70	4500	53	4669	40	4964	28	5390	28	5671	51	5431	27	7293	33	6921	12	6612	12	7005	11	7695
15	106	4200	70	4599	54	4673	40	4988	28	5388	28	5672	51	4964	27	8213	32	6750	11	5489	12	7683	12	7364
16	105	3650	68	4775	52	4800	37	5000	30	5249	32	6242	49	5106	28	7243	32	6625	11	5763	12	7603	12	7679
17	468	3600	66	4825	51	4525	37	5022	29	5200	72	5078	49	5250	28	6834	32	6307	11	5028	11	8273	11	8013
18	1700	1800	64	4600	49	4500	35	5169	30	4988	88	3221	49	5283	29	6574	29	6201	9	8428	11	8759	11	8059
19	367	2900	62	4600	48	4600	34	5237	29	5100	71	3691	49	5337	36	5324	27	6325	9	7954	11	8609	12	8430
20	149	2900	58	4699	48	4579	34	5370	32	5298	73	3512	48	5600	33	4026	25	6300	8	8360	12	6842	13	8592
21	112	3600	56	4800	45	4924	34	5376	41	5192	68	4209	46	5447	28	4800	23	6400	56	4629	12	6216	11	7539
22	109	3612	54	4885	48	4550	37	5215	42	4940	62	4587	46	5496	25	6000	21	6450	291	2500	12	8386	11	8376
23	105	3690	52	4912	47	4649	38	4970	37	4733	58	4681	46	5501	23	7000	19	6500	42	3000	11	8791	11	9587
24	92	6348	51	4913	46	4700	38	4985	35	5163	57	4831	44	5580	23	7167	19	6550	21	4600	11	9205	10	13383
25	106	3567	51	4862	43	4700	31	6218	32	5075	58	4886	41	5822	26	7240	19	6650	18	7416	11	8562	10	9899
26	88	3512	49	4913	41	4725	32	5760	33	5037	58	4816	41	5937	25	5922	19	6650	16	7204	10	8918	11	8475
27	88	3775	50	4988	41	4800	32	5000	32	5163	53	4800	43	5862	24	5940	17	6700	16	7455	10	9694	11	7959
28	88	3850	48	5000	41	4887	33	4770	30	5286	54	5133	43	5819	24	6031	17	7021	13	6764	10	9532	11	7436
29	87	3919	45	5228	41	4825	30	4386			56	5331	43	5813	24	5938	16	7431	12	7164	10	10175	12	7319
30	80	4000	46	5500	42	4902	34	4489			65	4680	43	5881	23	6912	15	10477	12	7814	10	10538	12	8647
31	75	4100			48	4863	41	4747			73	4528			22	8006			12	7991	9	11054		
Avg.	192	2581	62	4697	47	4891	38	4975	33	5208	46	4818	52	5166	31	6347	65	3863	24	4986	11	8670	11	9016

DAILY FLOW AND CONTINUOUS RECORDED QUALITY DATA

PRS Station No.: 754
Location: Elm Fork at Salton Crossing, Oklahoma
Water Year: 1962

Basin: Red River
Tributary to: North Fork of the Red River
Remarks: Records poor.
Stratification nil.

Equations Used to Compute Constituents--
Chlorides: Log Cl =1.5831 Log Sp.C.-2.9227
Sulfates: Log SO_4=0.3986 Log Sp.C.+1.6605
Dissolved Solids: DS =0.7421 Sp. C.

Discharge (cfs) and Specific Conductance, Micromhos/cm (µmhos)

Day	October		November		December		January		February		March		April		May		June		July		August		September	
	cfs	µmhos	cfs	µmhos	cfs	µmhos	cfs	µmhos	cfs	µmhos	cfs	µmhos	cfs	µmhos	cfs	µmhos	cfs	µmhos	cfs	µmhos	cfs	µmhos	cfs	µmhos
1	12	7769	40	6327	18	6740	15	5506	14	6000	13	7000	14	7250	60	6879	32	10199	16	9400	2468	1632	6	17006
2	12	7413	60	4500	18	6900	15	5453	14	6075	16	6800	14	7200	50	7147	29	8216	14	9600	130	2173	7	15866
3	12	7518	28	5500	18	6995	15	5316	14	6175	19	7500	15	7150	42	7103	27	7500	14	10300	64	3186	8	12863
4	12	7756	21	6313	18	6950	16	3912	14	6625	18	5800	16	7107	37	7082	13	7576	13	11200	52	4032	8	10156
5	12	8031	17	6242	20	6887	21	5581	14	6600	17	8000	18	7151	34	7106	53	7816	14	12002	37	4663	8	10499
6	12	9500	17	5979	20	7778	28	6362	14	6451	17	6550	21	7213	27	8532	25	6200	17	11663	29	5143	8	10162
7	12	11191	16	6336	19	6812	25	3872	15	6601	18	6475	20	7299	26	8534	14	6586	11	12316	24	5960	8	9428
8	12	9179	16	6691	20	7074	18	4696	15	6800	18	6375	18	7400	25	8378	16	6724	10	14500	22	6471	39	4780
9	17	8808	16	6633	21	6082	17	8581	15	6800	18	6324	18	7500	21	8598	127	5655	10	22000	20	6971	38	3600
10	15	8044	16	6813	20	6607	17	10445	15	6600	16	6722	18	7588	20	8774	73	4147	10	12500	18	7643	15	5617
11	12	8376	16	7013	19	10655	17	9311	15	6350	14	6800	18	7578	18	8800	23	5525	10	11412	16	8264	11	7109
12	12	8183	16	6539	15	7500	16	8410	16	6350	14	6800	17	7500	16	8800	14	6523	11	11613	15	10719	9	8333
13	13	8700	16	6486	13	5400	18	6888	16	6468	14	6800	16	7500	14	8800	10	7190	9	11270	16	10352	9	9250
14	12	8500	18	7789	12	5300	23	5262	16	6500	14	6800	15	7500	12	8800	8	7722	7	13983	16	9031	8	9939
15	12	7300	25	7783	11	5600	20	5447	16	6600	14	6800	14	7500	12	8970	264?	2268	6	15399	14	10343	14	6784
16	12	7800	25	7100	13	5700	19	6070	16	6800	14	6800	14	7500	15	9802	174	2492	6	16154	55	3099	73	3408
17	12	8000	24	7000	17	5700	19	5725	16	6975	14	6825	14	7500	36	8446	82	3737	6	16732	19	3470	611	2383
18	12	8000	21	7000	17	5700	17	4958	16	6900	14	7000	14	7500	34	6982	57	4939	6	16868	11	5568	67	2763
19	12	7500	21	7000	17	5751	18	6840	16	6700	14	7200	14	7500	18	7024	55	5114	6	17745	9	7600	44	4350
20	12	7000	21	7000	16	5802	23	6907	17	6549	14	7350	13	7500	14	7021	44	5608	6	17651	8	9800	1610	1889
21	12	7000	21	7000	15	6529	20	6667	17	7500	14	7300	13	7500	13	7099	34	5659	7	14908	8	11500	150	1968
22	12	7200	21	6973	15	7700	17	6019	16	8700	14	7250	13	7500	14	8551	28	5719	10	10343	7	12023	68	2767
23	12	8200	20	7050	15	7120	17	5962	17	8200	14	7300	13	7550	10	8675	24	6683	40	5263	7	12907	54	3333
24	12	7600	19	6653	15	5682	19	5221	16	7500	15	7400	13	7634	10	8459	22	7694	612	2127	7	14125	42	3809
25	12	7500	19	6400	15	5289	21	4505	17	7100	15	7400	14	7390	11	8013	21	7725	230	2203	7	14450	60	3718
26	12	7413	19	6400	15	5098	25	3910	17	9500	14	7400	579	3893	9	7859	20	8806	54	4425	7	14500	47	3387
27	12	7373	19	6412	15	5483	19	4251	14	12000	14	7449	4471	2055	9	8867	19	9407	38	5716	7	14500	38	3971
28	13	6876	18	6554	15	10839	17	4872	12	12000	13	7850	223	1900	9	8702	19	9551	33	6800	6	15648	35	4422
29	13	7832	18	6600	15	7769	15	5061			14	8582	114	4800	8	8502	18	9200	32	7300	6	16060	31	4800
30	14	6313	19	6615	15	6155	14	5763			14	8050	79	6200	8	8624	17	9211	27	7400	6	16770	29	5000
31	15	7688			15	4865	14	6000			14	7388			7	9354			20	6700	6	17500		
Avg.	13	7930	21	6490	16	6657	19	5862	15	7248	15	7074	195	2694	21	7887	125	3277	42	4634	101	2519	105	2657

DAILY FLOW AND CONTINUOUS RECORDED QUALITY DATA

USGS Station No.: 483
Location: North Fork of Red River near Carter, Oklahoma
Water Year: 1961

Basin: Red River
Tributary to: Red River
Remarks: Records poor. Stratification nil.

Equations Used to Compute Constituents--
Chlorides: Log Cl =1.21316 Log Sp.C.-1.63798
Sulfates: Log SO_4 =1.19053 Log Sp.C.-1.15330
Dissolved Solids: DS =0.7460 Sp.C.

Discharge (cfs) and Specific Conductance, Micrombos/cm (µmhos)

Day	October		November		December		January		February		March		April		May		June		July		August		September	
	cfs	µmhos	cfs	µmhos	cfs	µmhos	cfs	µmhos	cfs	µmhos	cfs	µmhos	cfs	µmhos	cfs	µmhos	cfs	µmhos	cfs	µmhos	cfs	µmhos	cfs	µmhos
1	29	1832	191	2500	151	2600	224	2621	367	2500	121	2692	302	2581	224	1325	40	2354	85	2100				
2	32	2001	179	2310	156	2600	215	2587	324	1951	117	2680	234	2532	92	1075	75	2242	84	2150				
3	31	2213	184	2370	156	2600	197	2551	224	2792	111	2650	152	2452	62	1500	4211	2021	83	2200				
4	28	2466	186	2400	159	2600	184	2477	191	2245	114	2600	117	2415	84	1610	6192	1100	77	2300				
5	32	2530	180	2650	162	2600	197	2556	170	2334	120	2650	105	1848	116	1113	2034	1190	67	2300				
6	28	2560	189	2500	166	2600	218	2580	156	2350	124	2700	119	1530	135	1350	1109	1223	65	2326				
7	28	2590	187	2600	170	2650	229	2600	203	2258	124	2750	130	1551	113	1700	2142	750	66	2326				
8	24	2620	180	2650	173	2700	229	2613	249	2353	124	2650	148	2301	76	1900	6309	1047	70	2272				
9	26	2650	180	2051	176	2700	221	2608	255	2400	121	2635	190	2405	42	2150	2019	1200	96	2238				
10	18	2680	180	1980	179	2700	216	2600	263	2250	120	2533	180	2614	30	2086	891	1425	293	20121				
11	103	1399	180	1980	182	2700	209	2523	313	1900	120	2466	159	2511	24	2042	484	1550	171	1585				
12	4375	600	181	1918	204	2700	206	2560	320	1750	120	2364	138	2526	16	2062	362	1650	151	1558				
13	1389	909	183	1611	229	2700	211	2556	190	2200	120	2494	121	2585	13	2100	312	1775	150	1618				
14	620	1150	190	1950	220	2700	208	2513	123	2400	120	2580	111	2625	14	2422	279	1824	134	1586				
15	309	1475	182	2173	243	2700	201	2519	110	2380	117	2653	107	2540	12	2444	269	1900	360	1577				
16	263	1500	181	2303	224	2700	198	2517	124	2365	116	2542	104	2548	8	2301	260	1987	296	1561				
17	310	1230	183	2516	220	2700	204	2553	137	2382	264	2353	104	2525	1950	774	249	2000	135	1437				
18	3989	800	180	2531	164	2700	206	2558	161	2360	743	2498	107	2501	812	1048	231	2000	239	1203				
19	2368	971	175	2566	125	2700	195	2518	136	2563	518	1719	105	2330	561	1330	218	2000	134	1045				
20	1173	1200	163	2561	119	2700	196	2515	166	2556	381	2437	94	2208	257	1389	191	2005	87	1289				
21	825	1325	157	2578	127	2700	196	2549	206	2460	351	2561	87	2180	159	1372	170	1737	102	1250				
22	530	1525	158	2595	136	2700	195	2580	277	2180	260	2536	84	2120	120	1650	151	1713	705	1675				
23	319	1630	152	2600	152	2700	187	2533	269	1866	213	2595	70	2115	101	2000	140	1837	259	1281				
24	243	1850	157	2600	164	2700	176	2581	179	1650	182	2607	58	2100	92	1982	130	1880	150	1300				
25	248	2000	153	2600	166	2700	169	2844	121	1900	165	2620	53	2076	96	1896	120	1817	107	1700				
26	265	2050	148	2600	166	2700	179	2864	107	2200	170	2628	45	2249	97	1975	110	1831	73	1800				
27	238	2150	147	2600	166	2700	189	2843	98	2500	179	2633	40	2395	83	1947	101	2082	56	1900				
28	271	2250	153	2600	167	2700	204	2873	105	2700	180	2679	39	2300	64	1946	175	2175	43	2000				
29	258	2330	146	2600	176	2683	219	2841			178	2632	39	2261	56	1857	115	2000	36	2100				
30	271	2450	144	2600	191	2698	227	2550			191	2567	64	1863	47	2009	93	1682	30	2200				
31	22	2550			220	2681	258	2300			227	2483			42	2287			29	2300				
Avg.	630	1083	171	2295	176	2678	205	2593	196	2225	197	2488	113	2347	181	1221	1139	1749	128	1604				

DAILY FLOW AND CONTINUOUS RECORDED QUALITY DATA

USGS Station No.: 481
Location: Salt Fork of Red River at Hanguan, Oklahoma
Water Year: 1961

Basin: Red River
Tributary to: Red River
Remarks: Records poor. Occasional minor stratification.

Equations Used to Compute Constituents--
Chlorides: Log Cl =1.12489 Log Sp.C.-1.54292
Sulfates: Log SO_4 =1.21820 Log Sp.C.-1.11305
Dissolved Solids: BS^{*}=0.8379 Sp.C.

Discharge (cfs) and Specific Conductance, Micrombos/cm (μmhos)

Day	October		November		December		January		February		March		April		May		June		July		August		September	
	cfs	μmhos	cfs	μmhos	cfs	μmhos	cfs	μmhos	cfs	μmhos	cfs	μmhos	cfs	μmhos	cfs	μmhos	cfs	μmhos	cfs	μmhos	cfs	μmhos	cfs	μmhos
1	16	2500	95	2140	59	2538	199	2295	406	2521	26	2809	457	2546	3	2878	0	--	39	2300	.1	1447	1	2000
2	15	2600	90	2236	52	2396	177	2015	410	2575	52	2789	214	3387	3	2980	0	--	38	2400	0	--	1	2000
3	16	2650	95	2342	49	2178	181	2267	207	2715	46	2555	53	4246	4	3061	4087	2207	38	2500	1	1500	2	2000
4	14	2850	105	2482	70	2164	174	2346	137	2207	42	2336	50	3645	6	3100	839	1426	37	2600	.4	1500	2	2000
5	14	2644	102	2306	88	2401	80	2343	162	2280	42	2331	44	3004	8	3200	138	1571	37	2750	0	--	1	2000
6	13	2699	99	2300	96	2698	66	2534	148	2387	40	2474	42	2963	10	2200	292	1698	37	2720	2	1500	1	2000
7	13	2746	89	2520	109	2896	63	2330	129	2548	37	2645	40	2801	9	2097	1402	1379	36	2513	0	--	6	1800
8	13	2798	77	2369	100	2641	66	2280	214	2577	37	3053	48	2854	4	2500	197	1500	36	2389	0	--	42	1500
9	13	2864	79	2580	85	2057	66	2294	185	2582	33	3047	109	2989	1	3000	93	1900	40	2047	0	--	12	1600
10	12	2836	80	2600	131	1762	62	2203	256	2597	3	2971	68	3718	1	3000	70	2000	71	2695	0	--	1	2300
11	27	2502	86	2600	196	1277	59	2078	443	2476	3	2920	59	2966	0	--	57	2100	72	2000	0	--	0	--
12	4080	800	89	2600	498	1812	56	2364	138	2089	30	2808	48	6189	0	--	50	2200	90	1639	0	--	0	--
13	1118	900	94	2600	503	1377	59	2517	88	2500	30	2671	40	6190	0	--	43	2250	53	1747	4	1600	0	--
14	516	1000	100	2600	204	1949	66	2404	86	2300	30	2744	30	3987	0	--	39	2300	43	1871	4	1700	0	--
15	300	1000	103	2600	115	2079	74	2408	74	2400	30	3078	21	3727	0	--	33	2344	1114	1761	1	1800	0	--
16	2843	800	91	2616	92	2225	79	2334	65	2601	46	2855	18	5539	0	--	33	2375	506	1776	1	1800	0	--
17	2100	800	109	2616	106	2214	79	2476	66	2633	542	2533	16	3377	0	--	34	2315	238	1191	0	--	0	--
18	8722	850	109	2591	97	2201	76	2527	65	2575	1438	2278	15	31160	2	2300	34	2303	170	1133	0	--	0	--
19	4016	875	117	2537	90	2253	67	2571	66	2422	210	2032	16	3100	24	2908	36	2300	74	1260	0	--	0	--
20	1247	1050	123	2590	92	2385	62	2545	69	1913	86	2122	13	3100	255	2786	37	2400	49	1176	27	1500	0	--
21	359	1500	118	2480	84	2500	55	2449	56	2238	56	2104	12	3100	124	2400	36	2411	197	817	59	1600	0	--
22	227	1250	111	2776	75	2504	51	2434	371	2574	130	2103	11	3100	40	2700	31	2496	844	1327	50	1800	0	--
23	171	2050	95	2447	67	2467	54	2322	390	2422	60	2335	10	3100	13	2600	26	2385	603	1038	34	1800	0	--
24	131	2100	85	2050	57	2487	38	2139	251	2188	52	2424	9	3100	5	2900	23	2424	119	1039	21	1800	0	--
25	114	2130	80	1891	55	2582	33	2615	193	2166	49	2445	8	3100	1	3000	21	2496	99	1049	13	1800	0	--
26	278	2118	85	1864	88	2000	32	2505	127	2283	48	2428	7	3100	3	3000	261	1783	59	1085	6	2000	0	--
27	342	2117	96	2155	88	2150	30	2533	87	2308	61	2405	6	3100	0	--	78	1600	77	1108	4	2000	0	--
28	176	2144	102	2633	79	2300	31	2516	67	2468	127	2500	5	3191	0	--	54	1800	18	1141	3	2000	0	--
29	134	2145	89	2621	68	2449	32	2327			61	2428	4	3187	0	--	47	2000	12	1214	2	2000	0	--
30	119	2114	75	2538	65	2478	51	2071			61	2613	3	3038	0	--	63	2200	9	1355	2	2000	0	--
31	103	2113			82	2218	155	2028			110	2630			0	--			7	1613	1	2000		
Avg.	927	944	96	2481	118	2041	76	2317	178	2418	129	2388	49	3077	17	2784	222	1917	151	1660	8	1722	2	1602

DAILY FLOW AND CONTINUOUS RECORDED QUALITY DATA

USGS Station No.: 481
Location: Sal. Fork of Red River at Mangum, Oklahoma
Water Year: 1962

Basin: Red River
Tributary to: Red River
Remarks: Records poor. Occasional minor stratification.

Equations Used to Compute Constituents--
Chlorides: Log Cl -1.12689 Log Sp.C.-1.56292
Sulfates: Log SO_4-1.21620 Log Sp.C.-1.11105
Dissolved Solids: DS°=0.8379 Sp.C.

Discharge (cfs) and Specific Conductance, Micromhos/cm (umhos)

Day	October		November		December		January		February		March		April		May		June		July		August		September	
	cfs	umhos	cfs	umhos	cfs	umhos	cfs	umhos	cfs	umhos	cfs	umhos	cfs	umhos	cfs	umhos	cfs	umhos	cfs	umhos	cfs	umhos	cfs	umhos
1	0	--	3	2141	17	2578	18	2427	59	2319	7	3097	0	--	60	2757	19	2745	17	2289	3786	1757	0	--
2	0	--	337	1753	18	2612	21	2373	58	2439	11	3008	0	--	38	2350	30	2360	9	2553	674	1235	0	--
3	0	--	71	2306	36	2604	24	2703	55	2518	14	3084	0	--	36	2745	27	2844	1	2586	296	1303	0	--
4	0	--	24	2443	43	2600	37	2681	52	2528	24	3177	1	4457	33	3480	25	3000	0	--	178	1438	0	--
5	0	--	15	2238	43	2560	48	1979	45	2582	25	3214	3	3810	31	2877	31	2644	0	--	106	1623	0	--
6	0	--	10	2329	36	2494	328	2473	40	2691	40	3167	10	3160	28	3060	36	2356	0	--	83	188	0	--
7	0	--	8	2500	35	2500	206	2773	37	2632	32	3144	80	3373	25	3074	43	2971	0	--	64	2110	0	--
8	0	--	7	2438	38	2487	90	2009	37	2687	24	2977	89	3610	22	3145	66	2930	0	--	31	2115	0	--
9	0	--	7	2725	44	2397	64	2674	40	2675	20	2964	67	3556	18	3230	209	1527	0	--	25	2086	0	--
10	0	--	7	2744	56	2243	331	2914	41	2696	22	3004	32	3331	15	3273	86	1639	0	--	20	2159	0	--
11	0	--	7	2787	53	2671	21	3142	45	2744	20	3444	25	3536	14	3483	86	1933	0	--	14	2339	0	--
12	0	--	7	2789	54	2916	15	3442	49	2648	18	3382	19	3771	11	3550	61	1969	128	1551	11	2836	0	--
13	0	--	7	2782	23	2883	14	3480	38	2701	17	3221	15	3230	6	3575	115	2612	21	1618	10	2857	0	--
14	0	--	16	2638	23	2836	14	3159	33	2785	16	3108	12	3161	0	--	127	2223	3	1780	8	2885	0	--
15	0	--	56	2283	30	2583	14	2873	33	2795	14	3147	9	3290	0	--	939	1935	0	--	6	2775	0	--
16	0	--	279	2302	102	2376	14	2691	32	2813	13	3173	7	3336	0	--	927	1048	0	--	6	2816	7	1600
17	0	--	68	2103	237	2600	14	2527	31	2828	10	3144	5	3348	0	--	108	1298	2	--	5	3033	893	1653
18	0	--	29	2073	113	2600	19	2680	27	2854	9	3061	3	3345	7	2774	68	1615	1	--	11	2600	194	1376
19	0	--	20	2021	53	2600	23	3161	25	912	8	3029	2	3350	55	3044	273	1647	6	1100	13	2600	80	1327
20	0	--	19	2246	41	2217	23	3116	22	2976	11	3167	1	3344	40	3150	331	1677	167	631	7	2500	3108	830
21	0	--	19	2388	33	2200	20	3345	21	2916	12	3290	1	3320	31	3077	77	1600	90	1108	5	2600	649	1002
22	0	--	20	2400	28	2300	21	3355	18	2905	12	3375	0	--	28	2963	45	1700	55	1139	5	2700	34	1087
23	0	--	23	2400	24	2350	19	3384	16	2931	11	3344	0	--	30	3159	36	1800	39	1793	3	2800	31	1538
24	0	--	31	2400	23	2400	30	2913	16	2987	6	3389	3	3008	304	1672	78	1900	131	1771	2	2900	27	1813
25	0	--	23	2400	20	2450	30	2950	15	3000	5	3376	3	2992	135	1844	25	2000	673	1814	1	3000	30	1800
26	0	--	20	2400	16	2500	441	2774	15	3000	5	3353	13	2800	10	1600	23	2284	258	1580	0	--	32	2000
27	0	--	24	2441	15	2558	717	2099	11	2956	5	3313	310	1740	3	2019	24	2006	90	1453	0	--	30	1500
28	0	--	28	2534	16	2630	734	2074	9	3247	3	3310	559	1787	0	--	30	1931	58	1510	0	--	29	3000
29	0	--	30	2550	16	2674	119	2028			3	3347	98	1811	0	--	33	1995	51	1721	0	--	14	3000
30	0	--	18	2558	18	2644	77	2177			4	3500	44	2003	0	--	24	2110	44	1988	0	--	18	3000
31	0	--			18	2609	67	2264			2	3709			0	--			38	2224	0	--		
Ave.	0	--	42	2374	42	2478	100	2290	33	2690	19	3188	160	1885	31	2158	135	1826	59	1611	173	1325	171	1049

DAILY FLOW AND CONTINUOUS RECORDED QUALITY DATA

PHS Station No.: 703
Location: Salt Fork of Red River near Wellington, Texas
Water Year: 1961

Basin: Red River
Tributary to: Red River
Remarks: Records poor. Occasional minor stratification.

Equations Used to Compute Constituents--
Chlorides: $Cl = 0.0889$ Sp.C.
Sulfates: $SO_4 = 0.4113$ Sp.C.
Dissolved Solids: $DS = 0.8495$ Sp.C.

Discharge (cfs) and Specific Conductance, Micromhos/cm (μmhos)

Day	October		November		December		January		February		March		April		May		June		July		August		September	
	cfs	μmhos	cfs	μmhos	cfs	μmhos	cfs	μmhos	cfs	μmhos	cfs	μmhos	cfs	μmhos	cfs	μmhos	cfs	μmhos	cfs	μmhos	cfs	μmhos	cfs	μmhos
1	13	2887	223	2600	33	2697	56	2600	161	1706	30	2653	111	812	8	2500	4	2945	10	2400				
2	14	2971	144	2206	48	2502	46	2600	113	1700	32	2600	90	562	10	2500	66	1990	10	2800				
3	16	3052	52	2325	56	2448	43	2600	104	1750	26	2600	71	2005	12	2400	3722	900	11	3000				
4	21	3189	50	2416	91	2371	41	2600	101	2000	21	2650	57	2511	26	2300	435	1226	10	3300				
5	21	3257	50	2326	63	2260	47	2600	89	2500	25	2650	45	2449	14	2400	348	1355	7	3404				
6	21	3250	48	2315	46	2306	48	2600	78	2600	30	2700	47	2468	9	2500	1705	966	5	3400				
7	19	3250	46	2396	44	2345	44	2700	84	2500	28	3000	55	2437	6	2500	534	1061	6	3400				
8	15	3250	48	2400	58	2302	34	2700	92	2500	24	3000	66	2362	3	2500	142	1632	66	2200				
9	13	3250	42	2417	81	2270	23	2800	91	2500	23	3000	56	2150	2	2400	87	1910	180	2000				
10	13	3250	42	2452	90	2267	26	2800	90	2500	25	3000	43	2353	3	2500	65	2053	80	1600				
11	668	1400	51	2522	124	2252	31	2700	90	2500	28	3000	31	2600	1	2600	52	2200	45	1610				
12	3416	800	56	2369	242	2250	33	2600	90	2500	30	3000	25	2600	2	2600	40	2450	40	2157				
13	394	1300	54	2298	23	2200	33	2600	91	2500	31	3000	19	2641	5	2450	31	2549	39	1997				
14	107	1650	51	2369	12	2200	28	2600	88	2500	29	3000	18	2600	5	2500	26	2549	59	2163				
15	1066	800	70	2471	26	2200	26	2600	88	2500	25	3000	18	2600	4	2550	33	2550	1721	800				
16	538	550	47	2489	4	2200	29	2600	85	2500	35	3000	15	2600	4	2600	55	2500	563	1050				
17	739	700	26	2633	1	2400	35	2600	83	2500	209	1774	13	2600	3	2600	64	2550	243	1200				
18	2802	740	27	2677	5	2450	32	2600	74	2600	161	1739	13	2600	18	2100	50	2600	69	1434				
19	1529	800	33	2612	13	2500	30	2600	74	2600	107	1950	11	2664	40	2000	33	2700	24	1769				
20	622	1050	37	2562	20	2600	26	2600	83	2500	150	1628	7	2675	20	2100	27	2750	18	2018				
21	539	1150	40	2593	5	2858	27	2600	158	2200	72	1949	6	2726	16	2100	25	2800	507	1000				
22	448	1300	39	2605	2	2940	38	2500	122	2200	56	2200	6	2800	12	2300	22	2700	682	750				
23	370	1650	45	2600	12	2509	51	2400	76	2300	46	2294	7	2800	10	2500	17	2700	191	950				
24	297	1900	50	2615	63	2156	55	3157	55	2400	50	2189	7	2800	10	2600	31	2200	81	1500				
25	334	2100	54	2567	69	2251	10	3787	42	2500	56	1991	6	2800	11	2500	346	1200	39	1800				
26	611	1400	53	2418	64	2413	10	3944	37	2600	54	2199	6	2800	8	2600	85	1600	19	2000				
27	347	1650	46	2430	61	2472	10	4125	34	2650	51	2175	6	2800	6	2700	36	1700	8	2400				
28	305	1850	37	2535	66	2600	13	4179	34	2700	46	2255	7	2600	7	2800	23	1800	5	2500				
29	303	2100	27	2806	70	2600	31	4069			44	1428	7	2600	7	3100	15	2000	4	2500				
30	271	2400	28	2776	64	2600	64	3528			69	2304	7	2500	6	3100	11	2200	4	2500				
31	239	2600			65	2600	136	2215			143	1945			5	3200			4	2500				
Avg.	520	1263	54	2471	52	2367	37	2731	86	2335	57	2159	29	2036	9	2417	271	1135	153	1075				

DAILY FLOW AND CONTINUOUS RECORDED QUALITY DATA

PHS Station No.: 750
Location: Red River near Quanah, Texas
Water Year: 1961

Basin: Red River
Tributary to: --
Remarks: Records poor.
Stratification nil.

Equations Used to Compute Constituents--
Chlorides: Log Cl =1.1833 Log Sp.C.-1.2978
Sulfates: Log SO_4=0.7086 Log Sp.C.+0.2751
Dissolved Solids: DS =0.6887 Sp.C.

Discharge (cfs) and Specific Conductance, Microwhos/cm (umhos)

Day	October		November		December		January		February		March		April		May		June		July		August		September	
	cfs	umhos	cfs	umhos	cfs	umhos	cfs	umhos	cfs	umhos	cfs	umhos	cfs	umhos	cfs	umhos	cfs	umhos	cfs	umhos	cfs	umhos	cfs	umhos
1	17	14200	157	19794	37	25000	219	18000	91	25000	64	25000	110	23000	7	20000	3	19200	17	14881	6	18000	4	18271
2	10	13500	129	20387	35	25000	197	20000	91	25000	56	24500	116	21000	9	20000	2	19200	8	13657	4	18800	3	19915
3	7	13500	98	20589	36	25000	161	21500	84	25000	45	24000	101	23000	10	20000	5	16500	4	17390	4	18500	9	16479
4	15	13800	84	21592	41	25000	135	22000	85	24000	32	23500	79	24000	13	20200	93	10000	3	18000	3	18000	10	16558
5	15	17400	68	22185	44	25000	122	22500	108	24000	24	23000	53	25000	10	20000	77	14000	2	18293	2	18000	5	16630
6	12	18000	56	22770	41	25000	110	23000	96	24000	19	23000	48	24500	10	20000	222	17445	2	18828	2	18000	3	18000
7	7	16500	55	23007	46	25000	101	23500	91	24000	15	23000	49	24000	15	21679	1525	12065	1	19000	2	18200	3	18193
8	5	13400	60	23000	54	25000	86	24000	91	24000	9	23000	48	23500	20	28000	399	10748	1	17384	2	18200	2	17991
9	3	11500	56	23000	71	26000	77	25000	101	24000	5	23000	42	23000	10	25557	224	10506	1	15283	2	18000	2	17844
10	3	11000	53	23000	136	24000	73	26000	125	24000	4	22500	40	23000	5	21548	109	11636	2859	8500	1	20000	1	17923
11	4	10000	54	23000	207	22000	71	25800	127	24000	6	22500	34	20141	3	19016	62	13318	1128	10000	1	19500	51	19856
12	1908	7800	58	23000	305	18000	68	25600	117	24000	7	22000	28	19538	1	18350	34	15353	821	7500	7	10500	55	14000
13	2893	8000	61	23000	654	16000	67	25400	116	24000	6	22000	25	19120	1	17333	21	16579	1658	5017	4	13000	39	15000
14	442	11000	63	23000	659	17500	63	25200	97	24500	5	22000	23	18500	1	17054	13	19000	978	3892	4	14000	25	23500
15	568	8500	61	23500	544	18000	59	25000	90	24500	4	22000	19	19000	1	17773	16	19500	983	3325	4	17500	16	24000
16	3218	6500	56	23500	455	18500	58	25000	85	24500	33	14609	18	19500	8	10736	23	20000	4466	3000	4	19000	10	20871
17	3413	6252	54	23500	401	19000	59	25000	81	24500	492	13479	19	19500	19	14037	27	22000	999	3800	6	20500	6	21710
18	21074	4330	54	23500	391	19500	49	25000	68	24000	829	10000	19	17605	13	12333	27	23000	437	6500	5	20200	4	19557
19	12857	4626	51	23500	363	20000	41	25000	61	24000	431	14000	19	18500	867	9530	31	25000	196	8500	6	19000	4	18496
20	5142	4400	51	23500	311	20500	37	24500	66	24000	344	18000	18	19000	2198	15448	29	27000	91	8239	32	17500	5	17559
21	1564	5000	58	23500	258	21000	34	24500	95	24000	346	18500	15	19500	212	12300	18	23000	78	8179	133	11500	6	18830
22	745	7110	52	23500	224	21344	32	24500	113	25000	351	18000	15	20000	73	12989	10	22000	56	8865	111	12500	7	25251
23	481	7800	47	23500	208	21675	35	24500	146	23000	200	20000	15	20500	34	15387	5	20000	2241	3542	54	15000	4	25026
24	360	10800	45	24000	201	21431	35	25000	154	23000	143	21000	11	20500	23	17501	2	15697	666	3409	29	17002	3	18228
25	356	9835	45	24000	172	21000	27	25000	148	23500	121	23000	9	21000	18	17888	112	11981	127	3645	15	18503	4	17677
26	605	9648	46	24000	151	21368	30	25000	121	24000	105	24000	6	21000	14	18500	904	11619	80	6694	9	18977	4	24416
27	324	10100	46	24000	115	21930	35	25000	90	25000	86	25000	4	21000	7	18600	398	10000	36	9200	6	20049	4	19408
28	275	10435	43	24000	77	22000	44	25200	74	25000	76	25000	4	21000	5	18800	516	12000	22	12000	3	19014	2	17145
29	230	10885	40	24000	82	22000	56	25300			79	24500	6	21000	5	19000	74	12500	19	14000	2	18513	3	16119
30	196	11301	38	24000	101	22000	71	25500			103	22000	7	21000	4	19000	36	14000	13	15500	2	18997	3	15869
31	171	14663			173	17283	82	26000			119	21000			3	19200			9	16500	2	17517		
Avg.	1836	5418	61	22630	213	19668	75	23300	100	24096	134	16965	33	22005	117	14035	167	12370	584	5197	15	14365	10	18397

DAILY FLOW AND CONTINUOUS RECORDED QUALITY DATA

PHS Station No.: 750
Location: Red River near Quanah, Texas
Water Year: 1962

Basin: Red River
Tributary to: --
Remarks: Records poor.
Stratification nil.

Equations Used to Compute Constituents--
Chlorides: Log Cl =1.1833 Log Sp.C.-1.2978
Sulfates: Log SO_4=0.7086 Log Sp.C.+0.2751
Dissolved Solids: DS =0.6887 Sp.C.

Discharge (cfs) and Specific Conductance, Micromhos/cm (μmhos)

Day	October		November		December		January		February		March		April		May		June		July		August		September	
	cfs	μmhos	cfs	μmhos	cfs	μmhos	cfs	μmhos	cfs	μmhos	cfs	μmhos	cfs	μmhos	cfs	μmhos	cfs	μmhos	cfs	μmhos	cfs	μmhos	cfs	μmhos
1	2	15489	25	22000	24	27570	22	26591	36	26803	9	27000	1	17854	91	13972	98	11314	61	18725	1939	8200	1	16489
2	2	16000	505	10000	24	27434	22	25914	31	26440	14	27500	1	18200	52	15631	122	16850	37	19958	3374	7256	4	18812
3	2	15546	228	14000	26	26092	23	25574	26	26936	16	26500	1	19050	32	17636	51	28234	21	21747	1737	7014	6	15778
4	3	16406	106	16500	31	27767	25	25839	24	26270	14	27000	3	18587	21	19710	24	30898	12	21593	421	7867	4	18007
5	2	17105	80	17500	34	27914	82	20212	19	26433	13	27500	23	21355	15	20394	145	16465	8	21637	139	9452	6	20585
6	2	17512	62	18500	32	28203	58	23877	13	26484	11	27000	46	30413	11	20663	265	23175	6	20362	56	11844	9	18250
7	3	17448	54	18000	29	27447	48	24812	13	26588	11	26500	60	38726	9	21011	218	17850	4	19910	28	14460	11	24500
8	3	16685	49	23000	40	27000	36	25858	16	26681	13	26000	69	39382	8	21751	517	9500	4	18915	17	16737	9	22816
9	25	14099	42	21413	59	28000	22	26843	17	26774	14	27500	48	34075	7	22002	1735	6000	3	18148	10	17830	7	21857
10	17	17000	37	22416	56	32000	15	26380	17	26466	15	28000	31	32495	4	22000	2715	5000	2	18058	7	17731	5	20388
11	55	32000	34	23338	40	35000	11	25340	16	26301	12	29000	18	28311	3	21689	686	11800	14	31758	5	17000	3	19098
12	37	23000	31	22258	23	32000	16	23242	15	27028	9	29000	12	28773	2	20882	375	13500	65	20237	4	16373	3	17923
13	17	18696	29	23098	23	28307	30	24000	14	26982	6	26000	9	27521	2	20427	208	15700	107	18870	4	15760	2	16425
14	6	17206	49	21411	39	27121	46	28000	14	26785	5	24000	7	26862	2	20476	210	16600	25	19561	4	15016	2	15529
15	4	17637	124	21549	51	28366	45	28500	17	25923	5	22720	5	27000	2	19964	104	17528	22	23876	4	16116	3	14126
16	4	17972	146	26058	59	28245	39	29400	17	26994	6	23855	3	25930	2	19330	1534	9000	16	23202	5	22417	31	6584
17	3	17285	140	38000	68	27640	31	29243	18	28000	5	25293	3	23653	2	19928	335	12500	7	23317	3	19500	643	5790
18	3	17339	132	28000	71	29146	25	26809	16	28000	5	25997	3	22950	2	20000	1364	6000	2	21743	2	16000	152	9945
19	3	16650	110	23601	61	31010	16	29891	14	28000	6	24855	3	23640	2	20000	13361	4000	74	6243	2	13000	19	12866
20	3	16984	94	25081	52	29368	11	28170	13	27579	11	26482	2	25130	29	11183	4018	8500	131	5679	2	11415	463	7052
21	4	16517	86	26072	47	28124	14	24781	13	26519	17	30889	1	25772	55	26405	1567	11790	34	14254	2	11717	468	4769
22	4	16564	81	26935	41	27909	13	26193	13	27874	12	29486	1	24030	20	29746	731	11097	14	19776	2	13594	103	8242
23	3	17465	72	28001	34	27624	25	27301	12	28000	7	27698	1	21523	9	25992	417	11090	40	17395	2	14288	30	11127
24	4	16799	63	28208	30	27487	42	24738	11	28000	5	27222	13	20574	5	24345	244	11988	2568	9700	2	14300	80	6505
25	3	16559	52	25826	27	27612	55	26627	11	28000	3	24258	30	28130	16	15398	171	14147	4145	9178	2	15717	1038	8556
26	3	16123	41	24001	26	27026	51	26539	12	28242	3	22665	35	26324	21	15333	373	11410	1895	9704	2	14790	955	12556
27	3	16676	30	24410	20	25525	52	26380	10	29502	2	21226	503	11000	6	19036	652	10365	279	10808	1	15039	159	16840
28	4	16657	20	23145	19	25229	51	29561	7	28549	2	21251	1580	10000	4	20590	320	11873	114	13348	1	15556	85	18070
29	4	16388	19	25023	19	25985	47	30292			1	20518	694	9500	2	21086	185	15092	996	12077	1	15251	47	20972
30	5	16585	22	26710	22	25423	42	27463			1	19694	223	12300	2	21959	94	17675	2285	9618	1	15282	32	21898
31	12	16669			22	25486	40	27129			1	18355			2	21982			1060	9181	1	15543		
Avg.	8	21015	85	20820	37	28406	34	26295	16	27051	8	25877	114	12854	14	18650	1095	7247	453	10019	251	7674	146	9318

769-562 O-65-13

DAILY FLOW AND CONTINUOUS RECORDED QUALITY DATA

PHS Station No.: 478
Location: Prairie Dog Town Fork of Red River near Brice, Texas
Water Year: 1961

Basin: Red River
Tributary to: Red River
Remarks: Records fair. Stratification nil.

Equations Used to Compute Constituents--
Chlorides: Log Cl =1.2410 Log Sp.C.-1.5485
Sulfates: Log SO_4=0.4880 Log Sp.C.+1.1787
Dissolved Solids: DS =0.7106 Sp.C.

Discharge (cfs) and Specific Conductance, Micromhos/cm (μmhos)

Day	October		November		December		January		February		March		April		May		June		July		August		September	
	cfs	μmhos	cfs	μmhos	cfs	μmhos	cfs	μmhos	cfs	μmhos	cfs	μmhos	cfs	μmhos	cfs	μmhos	cfs	μmhos	cfs	μmhos	cfs	μmhos	cfs	μmhos
1	2	9500	25	14766	3	26229	34	26000	13	25797	2	35000	22	22000	0	-	0	-	0	-	0	-	0	-
2	1	8700	19	16824	4	25204	19	25000	8	24564	1	36000	16	27000	0	-	0	-	.1	40000	0	-	0	-
3	.2	11000	17	17000	5	23865	12	26000	5	23856	.1	34000	7	30000	.6	10000	144	7500	.1	40000	0	-	0	-
4	0	-	17	17450	6	23372	10	27000	4	24610	0	-	3	32500	214	5000	54	11000	0	-	0	-	0	-
5	0	-	17	17352	7	22947	10	28000	4	26025	.1	34000	1	31114	17	7000	32	7000	0	-	0	-	0	-
6	0	-	16	17200	9	23666	10	28000	4	27086	0	-	2	32689	.7	9000	580	4500	0	-	0	-	0	-
7	0	-	15	17200	12	23368	10	28200	6	26470	.1	36000	2	36363	.1	11000	79	9000	0	-	0	-	54	8000
8	0	-	19	18353	14	21055	9	28600	6	25618	0	-	3	25458	0	-	31	11000	107	9000	0	-	215	4200
9	0	-	20	19399	26	20760	8	29000	6	26382	0	-	2	19701	0	-	4	13000	3164	2300	0	-	345	5000
10	0	-	17	19499	97	14000	8	29200	5	26381	.1	34000	1	24857	0	-	.8	15000	366	4800	0	-	160	7200
11	180	10000	16	19600	114	12000	7	27281	4	26387	.1	34000	.3	29465	0	-	0	-	130	9000	4	35034	84	10000
12	12	4038	17	19700	102	15000	6	27000	3	25753	0	-	.2	26598	0	-	0	-	14	13000	21	21863	61	16000
13	9	3789	15	19799	26	20000	6	27000	2	25721	0	-	.2	29200	0	-	0	-	1	15000	6	11152	9	15500
14	796	3669	11	20139	21	23356	4	24296	1	30000	0	-	0	-	0	-	0	-	.3	18000	.9	18047	1	15200
15	401	3658	10	19852	22	24992	4	26120	2	30000	.2	30000	0	-	0	-	39	10000	3066	2300	23	23500	.2	16200
16	3893	2600	9	19800	20	25758	3	26780	1	28980	14	26000	0	-	0	-	96	8500	422	3200	110	6000	0	-
17	5255	2350	8	19775	18	24258	3	27337	.7	27000	.26	22000	0	-	1	25000	86	6800	3	7200	0	-	0	-
18	3636	2600	9	19826	17	24621	3	28123	.6	27368	65	22000	0	-	9	20000	20	8000	.6	9124	248	5000	.2	25000
19	2143	2900	9	19750	12	25987	3	28230	2	27185	65	24000	0	-	1	22000	4	11000	.1	12005	116	7500	2	25000
20	103	6500	8	19898	10	27138	2	28800	55	23101	33	25500	0	-	.1	24000	.9	13500	212	3000	29	8000	0	-
21	57	10000	7	21627	9	27281	2	32000	45	20000	31	23951	0	-	0	-	0	-	697	2900	3	8200	0	-
22	55	11000	7	23582	11	27621	2	35000	18	21000	25	22000	0	-	0	-	0	-	74	3200	.2	5750	0	-
23	55	12000	7	24674	11	27560	2	38000	8	24000	18	22000	0	-	0	-	347	4500	5	6000	0	-	0	-
24	52	12500	7	25745	11	27699	2	35000	6	27000	12	18000	0	-	28	10000	1249	3200	1	9600	0	-	0	-
25	52	12000	7	26814	9	27838	5	35000	4	30000	11	20000	0	-	3	12000	2	6800	.2	13000	0	-	0	-
26	51	12500	7	27860	8	27536	13	32000	2	33000	8	21000	0	-	0	-	.1	7500	.1	15000	0	-	0	-
27	44	13500	4	28897	8	27400	8	32000	2	34000	4	22000	0	-	0	-	0	-	0	-	0	-	0	-
28	38	14500	3	27669	10	27200	6	26531			3	21000	0	-	0	-	0	-	0	-	0	-	0	-
29	21	15500	3	26500	13	26400	11	23923			11	23263	0	-	0	-	0	-	0	-	0	-	0	-
30	20	16000			42	25000	15	24703			23	15000	0	-	0	-	0	-	0	-	0	-	0	-
31																								
Avg.	547	2999	12	19448	22	19562	8	25957	8	23816	11	20663	2	26129	9	6422	93	4809	268	2766	18	7583	30	6496

DAILY FLOW AND CONTINUOUS RECORDED QUALITY DATA

PHS Station No.: 478
Location: Prairie Dog Town Fork of Red River near Brice, Texas
Water Year: 1962

Basin: Red River
Tributary to: Red River
Remarks: Records fair. Stratification nil.

Equations Used to Compute Constituents--
Chlorides: Log Cl =1.2410 Log Sp.C.-1.5485
Sulfates: SO_4=0.4880 Log Sp.C.+1.1787
Dissolved Solids: DS =0.7106 Sp.C.

Discharge (cfs) and Specific Conductance, Micrombos/cm (µmhos)

Day	October		November		December		January		February		March		April		May		June		July		August		September	
	cfs	µmhos	cfs	µmhos	cfs	µmhos	cfs	µmhos	cfs	µmhos	cfs	µmhos	cfs	µmhos	cfs	µmhos	cfs	µmhos	cfs	µmhos	cfs	µmhos	cfs	µmhos
1	0	-	74	9858	.2	60000	.1	62900	1	33375	0	-	0	-	.1	69125	.2	8500	2	19281	1367	2500	0	-
2	0	-	33	12732	.1	60000	.1	61509	.7	41569	0	-	0	-	.1	66625	23	6200	1	18766	453	2500	0	-
3	0	-	3	21000	.1	60000	.1	61324	.5	48583	0	-	0	-	.1	66750	5	6000	1	20891	217	3500	.1	23000
4	0	-	.3	25000	.1	60000	.1	55313	.3	50000	0	-	0	-	.1	65250	3	6500	.6	24088	121	5000	0	-
5	0	-	.1	27500	.1	60000	0	-	.2	50000	0	-	0	-	.1	64750	96	7800	.6	21613	51	6200	0	-
6	0	-	.1	33000	.1	60000	0	-	.2	43938	0	-	0	-	.1	63250	25	6014	9	5216	23	7500	0	-
7	0	-	.1	40000	.1	60000	.1	60000	.2	47649	0	-	0	-	.1	60000	5	6409	7	12876	11	9000	0	-
8	0	-	0	-	.2	60000	.1	60000	.2	35000	0	-	0	-	.1	60000	3	10457	2	13935	6	9643	0	-
9	.7	2000	0	-	.3	60000	0	-	.2	12000	0	-	0	-	.1	60000	8	8289	12	13461	4	10634	0	-
10	0	-	0	-	.2	60000	0	-	.1	10000	0	-	0	-	0	-	23	10625	193	4707	2	11200	0	-
11	0	-	0	-	.1	60000	0	-	.1	18000	0	-	0	-	0	-	41	12406	16	8122	.6	6300	0	-
12	0	-	0	-	0	-	0	-	.1	12025	0	-	0	-	0	-	107	7510	285	5060	.4	7000	0	-
13	0	-	0	-	0	-	0	-	.1	11589	0	-	0	-	0	-	48	9691	108	6500	1	12500	0	-
14	0	-	3	20000	0	-	.1	60000	.1	11000	0	-	0	-	0	-	16	10136	16	7500	1	15000	0	-
15	0	-	216	15000	0	-	.1	60000	.1	10000	0	-	0	-	0	-	319	5000	3	9000	6	11612	.1	13000
16	0	-	170	15000	0	-	.1	60000	.1	11000	0	-	0	-	0	-	8	7926	1	10000	1	7200	.1	7800
17	0	-	38	18000	0	-	0	-	.1	11000	0	-	0	-	52	17000	2	12247	1	8838	.2	5000	.1	6500
18	0	-	14	22000	0	-	0	-	0	-	0	-	0	-	30	10254	2042	3000	1	8332	.1	5000	.1	6031
19	0	-	7	25000	0	-	0	-	0	-	0	-	0	-	2	9975	2365	3588	1	8095	.1	5000	0	-
20	0	-	7	26300	0	-	0	-	0	-	0	-	0	-	3	9900	1038	5161	3	25534	0	-	.1	5500
21	0	-	5	28324	0	-	0	-	0	-	0	-	0	-	1	7800	456	4566	80	9037	0	-	.1	5200
22	0	-	4	28540	0	-	0	-	0	-	0	-	0	-	.1	5000	302	4537	76	8068	0	-	.1	5300
23	0	-	3	28065	0	-	0	-	0	-	0	-	0	-	0	-	150	5283	771	6098	0	-	0	-
24	0	-	2	28998	0	-	0	-	0	-	0	-	0	-	0	-	51	6586	1355	6000	0	-	0	-
25	0	-	1	35000	0	-	1	63937	0	-	0	-	0	-	0	-	755	6935	641	5300	.1	5200	.6	25000
26	0	-	.6	42000	0	-	68	17035	0	-	0	-	83	3500	0	-	374	6313	41	6500	0	-	3	10500
27	0	-	.3	50000	0	-	24	24867	0	-	0	-	18	2000	0	-	170	6517	23	7200	0	-	1	12000
28	0	-	.2	55000	0	-	9	27441	0	-	0	-	3	2500	0	-	94	9263	1680	3000	0	-	.3	10000
29	0	-	.2	60000	0	-	5	27509			0	-	.7	5500	0	-	13	11711	1438	3000	0	-	.1	10000
30	36	7500	.2	60000	0	-	3	28739			0	-	.3	12000	0	-	3	16170	921	3200	0	-	.4	10000
31	183	8200			.1	65000	2	31616			0	-			0	-			717	3500	0	-		
Ave.	7	8124	19	25351	.1	60278	3	22389	.2	34609	0	-	4	3242	3	14565	285	4612	271	4364	73	2976	.2	11626

CHEMICAL ANALYSES OF NATURAL BRINE SOURCES

CHEMICAL ANALYSES OF NATURAL BRINE SOURCES

Area Location: Big Salt Plains on the Cimarron River
Area No.: II
Collection Point: Blackmon's Brine Pond
Basin: Arkansas River
Tributary to: Arkansas River

Date collected:	1/6/60				
Laboratory:	RATSEC				
Time of collection:	--				
pH	7.3				
Specific Gravity, 20°C	1.1876				
Spec. cond. 25°C, micromhos/cm	220,000				
Total alkalinity ($CaCO_3$)	28				
Total hardness ($CaCO_3$)	6,550				
Dissolved solids*	312,000				
Calcium (Ca)	1,420				
Magnesium (Mg)	730				
Sodium (Na)	119,000				
Potassium (K)	150				
Sulfate (SO_4)	3,500				
Chloride (Cl)	178,000				
Iron (Fe)	0.08				
Silica (SiO_2)	3.0				
Boron (B)	2.0				
Fluoride (F)	0.2				
Iodine (I)	< 0.2				
Bromine (Br)	128				
Manganese (Mn)	--				

All chemical analyses expressed as mg/l, except pH and unless otherwise indicated.
*Determined at 103°C by SEC laboratory and at 180°C by USGS laboratory.

CHEMICAL ANALYSES OF NATURAL BRINE SOURCES

Area Location: Big Salt Plains on the Cimarron River
Area No.: II
Collection Point: Brine Well ½-mile Southeast of Blackmon's House
Basin: Arkansas River
Tributary to: Arkansas River

Date collected:	5/26/60	8/16/60			
Laboratory:	RATSEC	RATSEC			
Time of collection:	--	--			
pH	4.1	6.4			
Specific Gravity, 20°C	1.1944	1.1982			
Spec. cond. 25°C, micromhos/cm	220,000	210,000			
Total alkalinity ($CaCO_3$)	< 20	1.2			
Total hardness ($CaCO_3$)	6,800	6,800			
Dissolved solids*	320,300	315,000			
Calcium (Ca)	1,200	1,520			
Magnesium (Mg)	925	730			
Sodium (Na)	110,000	102,000			
Potassium (K)	230	162			
Sulfate (SO_4)	4,500	3,800			
Chloride (Cl)	189,000	188,000			
Iron (Fe)	3.2	0			
Silica (SiO_2)	0.08	1.4			
Boron (B)	0.4	1.2			
Fluoride (F)	2.0	2.9			
Iodine (I)	--	--			
Bromine (Br)	< 20	166			
Manganese (Mn)	0.1	2.0			

All chemical analyses expressed as mg/l, except pH and unless otherwise indicated.
*Determined at 103°C by SEC laboratory and at 180°C by USGS laboratory.

CHEMICAL ANALYSES OF NATURAL BRINE SOURCES

Area Location: Big Salt Plains on the Cimarron River
Area No.: II
Collection Point: Brine Well, 500 feet Southwest of Blackmon's House
Basin: Arkansas River
Tributary to: Arkansas River

Date collected:	5/26/60	9/13/60			
Laboratory:	RATSEC	RATSEC			
Time of collection:	--	--			
pH	5.6	7.3			
Specific Gravity, 20°C	1.1930	1.2132			
Spec. cond. 25°C, micromhos/cm	210,000	180,000			
Total alkalinity ($CaCO_3$)	< 20	28			
Total hardness ($CaCO_3$)	6,400	7,200			
Dissolved solids*	318,400	313,500			
Calcium (Ca)	1,440	1,520			
Magnesium (Mg)	680	825			
Sodium (Na)	108,000	118,800			
Potassium (K)	200	140			
Sulfate (SO_4)	4,500	3,500			
Chloride (Cl)	189,000	189,000			
Iron (Fe)	Trace	0.10			
Silica (SiO_2)	1.8	--			
Boron (B)	1.6	2.0			
Fluoride (F)	2.0	2.8			
Iodine (I)	--	--			
Bromine (Br)	< 20	20			
Manganese (Mn)	Trace	--			

All chemical analyses expressed as mg/l, except pH and unless otherwise indicated.
*Determined at 103°C by SEC laboratory and at 180°C by USGS laboratory.

CHEMICAL ANALYSES OF NATURAL BRINE SOURCES

Area Location: Big Salt Plains on the Cimarron River
Area No.: II
Collection Point: Brine Well, 1000 feet West-Southwest of Blackmon's House
Basin: Arkansas River
Tributary to: Arkansas River

Date collected:	5/26/60	8/16/60			
Laboratory:	RATSEC	RATSEC			
Time of collection:	--	--			
pH	4.1	4.8			
Specific Gravity, 20°C	1.1685	1.1670			
Spec. cond. 25°C, micromhos/cm	220,000	205,000			
Total alkalinity ($CaCO_3$)	< 20	< 1.0			
Total hardness ($CaCO_3$)	7,200	6,000			
Dissolved solids*	276,700	265,000			
Calcium (Ca)	1,840	1,280			
Magnesium (Mg)	630	680			
Sodium (Na)	103,000	92,000			
Potassium (K)	170	138			
Sulfate (SO_4)	3,800	2,900			
Chloride (Cl)	139,000	138,500			
Iron (Fe)	62.5	12.0			
Silica (SiO_2)	1.8	1.8			
Boron (B)	4.7	0.45			
Fluoride (F)	0.5	2.9			
Iodine (I)	--	--			
Bromine (Br)	< 20	104			
Manganese (Mn)	1.8	3.3			

All chemical analyses expressed as mg/l, except pH and unless otherwise indicated.
*Determined at 103°C by SEC laboratory and at 180°C by USGS laboratory.

CHEMICAL ANALYSES OF NATURAL BRINE SOURCES

Area Location: Big Salt Plains on the Cimarron River
Area No.: II
Collection Point: Brine Spring at Buffalo Creek Confluence
Basin: Arkansas River
Tributary to: Arkansas River

Date collected:	11/17/59	5/19/60			
Laboratory:	USGS	RATSEC			
Time of collection:	--	--			
pH	6.8	6.9			
Specific Gravity, 20°C	1.204	1.1953			
Spec. cond. 25°C, micromhos/cm	215,000	220,000			
Total alkalinity ($CaCO_3$)	25	30			
Total hardness ($CaCO_3$)	7,780	8,000			
Dissolved solids*	--	317,800			
Calcium (Ca)	1,340	1,440			
Magnesium (Mg)	1,080	1,070			
Sodium (Na)	120,000	110,000			
Potassium (K)	--	230			
Sulfate (SO_4)	4,500	4,950			
Chloride (Cl)	187,000	189,500			
Iron (Fe)	--	0			
Silica (SiO_2)	1.5	3.4			
Boron (B)	1.5	1.7			
Fluoride (F)	--	3.2			
Iodine (I)	--	--			
Bromine (Br)	--	< 20			
Manganese (Mn)	--	0			

All chemical analyses expressed as mg/l, except pH and unless otherwise indicated.
*Determined at 103°C by SEC laboratory and at 180°C by USGS laboratory.

CHEMICAL ANALYSES OF NATURAL BRINE SOURCES

Area Location: Great Salt Plains on Salt Fork of the Arkansas River
Area No.: I
Collection Point: Shallow Ground Water from Great Salt Plains
Basin: Arkansas River
Tributary to: Arkansas River

Date collected:	1/5/60				
Laboratory:	RATSEC				
Time of collection:	--				
pH	7.7				
Specific Gravity, 20°C	1.1338				
Spec. cond. 25°C, micromhos/cm	--				
Total alkalinity ($CaCO_3$)	92				
Total hardness ($CaCO_3$)	6,250				
Dissolved solids*	221,600				
Calcium (Ca)	1,140				
Magnesium (Mg)	835				
Sodium (Na)	87,500				
Potassium (K)	104				
Sulfate (SO_4)	5,250				
Chloride (Cl)	129,500				
Iron (Fe)	0.32				
Silica (SiO_2)	3.8				
Boron (B)	2.0				
Fluoride (F)	0.8				
Iodine (I)	< 0.2				
Bromine (Br)	20				
Manganese (Mn)	--				

All chemical analyses expressed as mg/l, except pH and unless otherwise indicated.
*Determined at 103°C by SEC laboratory and at 180°C by USGS laboratory.

CHEMICAL ANALYSES OF NATURAL BRINE SOURCES

Area Location: Great Salt Plains on Salt Fork of the Arkansas River
Area No.: I
Collection Point: Ground Water, 75 feet Southwest of Observation Tower
Basin: Arkansas River
Tributary to: Arkansas River

Date collected:	5/19/60				
Laboratory:	RATSEC				
Time of collection:	--				
pH	7.0				
Specific Gravity, 20°C	1.1218				
Spec. cond. 25°C, micromhos/cm	--				
Total alkalinity ($CaCO_3$)	90				
Total hardness ($CaCO_3$)	5,600				
Dissolved solids*	194,600				
Calcium (Ca)	1,200				
Magnesium (Mg)	630				
Sodium (Na)	73,500				
Potassium (K)	150				
Sulfate (SO_4)	5,350				
Chloride (Cl)	113,000				
Iron (Fe)	0				
Silica (SiO_2)	6.8				
Boron (B)	1.5				
Fluoride (F)	4.0				
Iodine (I)	--				
Bromine (Br)	< 20				
Manganese (Mn)	0				

All chemical analyses expressed as mg/l, except pH and unless otherwise indicated.
*Determined at 103°C by SEC laboratory and at 180°C by USGS laboratory.

CHEMICAL ANALYSES OF NATURAL BRINE SOURCES

Area Location: Great Salt Plains on Salt Fork of the Arkansas River
Area No.: I
Collection Point: Ground Water, 150 feet Northeast of Observation Tower
Basin: Arkansas River
Tributary to: Arkansas River

Date collected:	5/19/60				
Laboratory:	RATSEC				
Time of collection:	--				
pH	6.9				
Specific Gravity, 20°C	1.1621				
Spec. cond. 25°C, micromhos/cm	--				
Total alkalinity ($CaCO_3$)	13.0				
Total hardness ($CaCO_3$)	8,800				
Dissolved solids*	265,600				
Calcium (Ca)	1,520				
Magnesium (Mg)	1,215				
Sodium (Na)	102,000				
Potassium (K)	220				
Sulfate (SO_4)	7,350				
Chloride (Cl)	153,500				
Iron (Fe)	0				
Silica (SiO_2)	7.6				
Boron (B)	1.0				
Fluoride (F)	4.0				
Iodine (I)	--				
Bromine (Br)	20				
Manganese (Mn)	0				

All chemical analyses expressed as mg/l, except pH and unless otherwise indicated.
*Determined at 103°C by SEC laboratory and at 180°C by USGS laboratory.

CHEMICAL ANALYSES OF NATURAL BRINE SOURCES

Area Location: Great Salt Plains on Salt Fork of the Arkansas River
Area No.: I
Collection Point: Ground Water near Southwest Entrance, 3 miles South of Tower
Basin: Arkansas River
Tributary to: Arkansas River

Date collected:	5/19/60				
Laboratory:	RATSEC				
Time of collection:	--				
pH	7.6				
Specific Gravity, 20°C	1.0055				
Spec. cond. 25°C, micromhos/cm	27,000				
Total alkalinity ($CaCO_3$)	340				
Total hardness ($CaCO_3$)	1,100				
Dissolved solids*	16,400				
Calcium (Ca)	240				
Magnesium (Mg)	120				
Sodium (Na)	6,800				
Potassium (K)	50				
Sulfate (SO_4)	900				
Chloride (Cl)	9,500				
Iron (Fe)	0				
Silica (SiO_2)	16.4				
Boron (B)	0.2				
Fluoride (F)	4.0				
Iodine (I)	--				
Bromine (Br)	< 20				
Manganese (Mn)	0				

All chemical analyses expressed as mg/l, except pH and unless otherwise indicated.
*Determined at 103°C by SEC laboratory and at 180°C by USGS laboratory.

CHEMICAL ANALYSES OF NATURAL BRINE SOURCES

Area Location: Great Salt Plains on Salt Fork of the Arkansas River
Area No.: I
Collection Point: Ground Water, 150 feet Northwest of Observation Tower
Basin: Arkansas River
Tributary to: Arkansas River

Date collected:	9/13/60				
Laboratory:	RATSEC				
Time of collection:	--				
pH	7.4				
Specific Gravity, 20°C	1.1721				
Spec. cond. 25°C, micromhos/cm	--				
Total alkalinity ($CaCO_3$)	92				
Total hardness ($CaCO_3$)	8,800				
Dissolved solids*	273,800				
Calcium (Ca)	1,120				
Magnesium (Mg)	1,460				
Sodium (Na)	102,500				
Potassium (K)	140				
Sulfate (SO_4)	6,600				
Chloride (Cl)	161				
Iron (Fe)	0				
Silica (SiO_2)	--				
Boron (B)	1.1				
Fluoride (F)	3.3				
Iodine (I)	--				
Bromine (Br)	60				
Manganese (Mn)	--				

All chemical analyses expressed as mg/l, except pH and unless otherwise indicated.
*Determined at 103°C by SEC laboratory and at 180°C by USGS laboratory.

CHEMICAL ANALYSES OF NATURAL BRINE SOURCES

Area Location: Little Salt Plains on the Cimarron River
Area No.: III
Collection Point: Shallow Ground Water approximately 3 feet below surface
Basin: Arkansas River
Tributary to: Arkansas River

Date collected:	1/6/60				
Laboratory:	RATSEC				
Time of collection:	--				
pH	7.2				
Specific Gravity, 20°C	1.0636				
Spec. cond. 25°C, micromhos/cm	125,000				
Total alkalinity ($CaCO_3$)	284				
Total hardness ($CaCO_3$)	4,000				
Dissolved solids*	107,500				
Calcium (Ca)	1,040				
Magnesium (Mg)	340				
Sodium (Na)	42,500				
Potassium (K)	95				
Sulfate (SO_4)	1,440				
Chloride (Cl)	61,000				
Iron (Fe)	0.12				
Silica (SiO_2)	14.6				
Boron (B)	1.0				
Fluoride (F)	0.9				
Iodine (I)	< 0.2				
Bromine (Br)	< 10				
Manganese (Mn)	--				

All chemical analyses expressed as mg/l, except pH and unless otherwise indicated.

*Determined at 103°C by SEC laboratory and at 180°C by USGS laboratory.

CHEMICAL ANALYSES OF NATURAL BRINE SOURCES

Area Location: Little Salt Plains on the Cimarron River
Area No.: III
Collection Point: Brine Seep on East Side Salt Plain
Basin: Arkansas River
Tributary to: Arkansas River

Date collected:	11/17/59				
Laboratory:	USGS				
Time of collection:	--				
pH	6.7				
Specific Gravity, 20°C	1.204				
Spec. cond. 25°C, micromhos/cm	215,000				
Total alkalinity ($CaCO_3$)	--				
Total hardness ($CaCO_3$)	7,570				
Dissolved solids*	--				
Calcium (Ca)	1,540				
Magnesium (Mg)	910				
Sodium (Na)	125,000				
Potassium (K)	--				
Sulfate (SO_4)	4,560				
Chloride (Cl)	194,000				
Iron (Fe)	--				
Silica (SiO_2)	2.5				
Boron (B)	2.0				
Fluoride (F)	--				
Iodine (I)	--				
Bromine (Br)	--				
Manganese (Mn)	--				

All chemical analyses expressed as mg/l, except pH and unless otherwise indicated.
*Determined at 103°C by SEC laboratory and at 180°C by USGS laboratory.

CHEMICAL ANALYSES OF NATURAL BRINE SOURCES

Area Location: Salt Creek of the Cimarron River
Area No.: IV
Collection Point: Middle Branch of Salt Creek, 5 miles Southeast of Okeene, Oklahoma
Basin: Arkansas River
Tributary to: Cimarron River

Date collected:	8/15/60				
Laboratory:	RATSEC				
Time of collection:	--				
pH	7.2				
Specific Gravity, 20°C	1.0935				
Spec. cond. 25°C, micromhos/cm	128,000				
Total alkalinity ($CaCO_3$)	48				
Total hardness ($CaCO_3$)	7,200				
Dissolved solids*	116,000				
Calcium (Ca)	1,920				
Magnesium (Mg)	580				
Sodium (Na)	38,000				
Potassium (K)	110				
Sulfate (SO_4)	5,800				
Chloride (Cl)	65,000				
Iron (Fe)	Trace				
Silica (SiO_2)	7.4				
Boron (B)	3.9				
Fluoride (F)	3.6				
Iodine (I)	--				
Bromine (Br)	39				
Manganese (Mn)	0				

All chemical analyses expressed as mg/l, except pH and unless otherwise indicated.
*Determined at 103°C by SEC laboratory and at 180°C by USGS laboratory.

CHEMICAL ANALYSES OF NATURAL BRINE SOURCES

Area Location: Salt Creek of the Cimarron River
Area No.: IV
Collection Point: North Branch of Salt Creek, 5 miles Southeast of Okeene, Oklahoma
Basin: Arkansas River
Tributary to: Cimarron River

Date collected:	8/15/60				
Laboratory:	RATSEC				
Time of collection:	--				
pH	7.1				
Specific Gravity, 20°C	1.0718				
Spec. cond. 25°C, micromhos/cm	124,000				
Total alkalinity ($CaCO_3$)	40				
Total hardness ($CaCO_3$)	6,000				
Dissolved solids*	107,000				
Calcium (Ca)	1,760				
Magnesium (Mg)	390				
Sodium (Na)	37,000				
Potassium (K)	100				
Sulfate (SO_4)	5,600				
Chloride (Cl)	63,500				
Iron (Fe)	Trace				
Silica (SiO_2)	7.2				
Boron (B)	3.4				
Fluoride (F)	3.4				
Iodine (I)	--				
Bromine (Br)	34				
Manganese (Mn)	0				

All chemical analyses expressed as mg/l, except pH and unless otherwise indicated.
*Determined at 103°C by SEC laboratory and at 180°C by USGS laboratory.

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CHEMICAL ANALYSES OF NATURAL BRINE SOURCES

Area Location: Salt Creek of the Cimarron River
Area No.: IV
Collection Point: 4 miles North of Hitchcock, Oklahoma
Basin: Arkansas River
Tributary to: Cimarron River

Date collected:	11/16/59				
Laboratory:	USGS				
Time of collection:	--				
pH	7.4				
Specific Gravity, 20°C	1.102				
Spec. cond. 25°C, micromhos/cm	159,000				
Total alkalinity ($CaCO_3$)	--				
Total hardness ($CaCO_3$)	7,200				
Dissolved solids*	--				
Calcium (Ca)	1,870				
Magnesium (Mg)	636				
Sodium (Na)	57,300				
Potassium (K)	--				
Sulfate (SO_4)	3,520				
Chloride (Cl)	90,800				
Iron (Fe)	--				
Silica (SiO_2)	4.0				
Boron (B)	2.5				
Fluoride (F)	--				
Iodine (I)	--				
Bromine (Br)	--				
Manganese (Mn)	--				

All chemical analyses expressed as mg/l, except pH and unless otherwise indicated.
*Determined at 103°C by SEC laboratory and at 180°C by USGS laboratory.

CHEMICAL ANALYSES OF NATURAL BRINE SOURCES

Area Location: Rattlesnake Creek
Area No.: XII
Collection Point: 5.5 miles Northeast of St. John, Kansas
Basin: Arkansas River
Tributary to: Arkansas River

Date collected:	10/5/60				
Laboratory:	RATSEC				
Time of collection:	--				
pH	8.2				
Specific Gravity, 20°C	1.0085				
Spec. cond. 25°C, micromhos/cm	27,000				
Total alkalinity ($CaCO_3$)	164				
Total hardness ($CaCO_3$)	2,000				
Dissolved solids*	20,000				
Calcium (Ca)	480				
Magnesium (Mg)	194				
Sodium (Na)	7,300				
Potassium (K)	50				
Sulfate (SO_4)	1,000				
Chloride (Cl)	11,000				
Iron (Fe)	0				
Silica (SiO_2)	--				
Boron (B)	0.7				
Fluoride (F)	1.8				
Iodine (I)	--				
Bromine (Br)	< 20				
Manganese (Mn)	0				

All chemical analyses expressed as mg/l, except pH and unless otherwise indicated.
*Determined at 103°C by SEC laboratory and at 180°C by USGS laboratory.

CHEMICAL ANALYSES OF NATURAL BRINE SOURCES

Area Location: Rattlesnake Creek
Area No.: XII
Collection Point: 5.7 miles Northeast of St. John, Kansas
Basin: Arkansas River
Tributary to: Arkansas River

Date collected:	10/5/60				
Laboratory:	RATSEC				
Time of collection:	--				
pH	8.3				
Specific Gravity, 20°C	0.9960				
Spec. cond. 25°C, micromhos/cm	35,000				
Total alkalinity ($CaCO_3$)	224				
Total hardness ($CaCO_3$)	400				
Dissolved solids*	2,280				
Calcium (Ca)	64				
Magnesium (Mg)	58				
Sodium (Na)	770				
Potassium (K)	9				
Sulfate (SO_4)	100				
Chloride (Cl)	1,100				
Iron (Fe)	0.2				
Silica (SiO_2)	--				
Boron (B)	0.3				
Fluoride (F)	0.7				
Iodine (I)	--				
Bromine (Br)	50				
Manganese (Mn)	0				

All chemical analyses expressed as mg/l, except pH and unless otherwise indicated.
*Determined at 103°C by SEC laboratory and at 180°C by USGS laboratory.

CHEMICAL ANALYSES OF NATURAL BRINE SOURCES

Area Location: Rattlesnake Creek
Area No.: XII
Collection Point: 6.0 miles Northeast of St. John, Kansas
Basin: Arkansas River
Tributary to: Arkansas River

Date collected:	10/5/60				
Laboratory:	RATSEC				
Time of collection:	--				
pH	8.1				
Specific Gravity, 20°C	0.9947				
Spec. cond. 25°C, micromhos/cm	1,200				
Total alkalinity ($CaCO_3$)	160				
Total hardness ($CaCO_3$)	224				
Dissolved solids*	720				
Calcium (Ca)	64				
Magnesium (Mg)	16				
Sodium (Na)	183				
Potassium (K)	4				
Sulfate (SO_4)	45				
Chloride (Cl)	272				
Iron (Fe)	0				
Silica (SiO_2)	--				
Boron (B)	0.2				
Fluoride (F)	0.7				
Iodine (I)	--				
Bromine (Br)	< 20				
Manganese (Mn)	0				

All chemical analyses expressed as mg/l, except pH and unless otherwise indicated.
*Determined at 103°C by SEC laboratory and at 180°C by USGS laboratory.

CHEMICAL ANALYSES OF NATURAL BRINE SOURCES

Area Location: Rattlesnake Creek
Area No.: XII
Collection Point: 6.2 miles Northeast of St. John, Kansas
Basin: Arkansas River
Tributary to: Arkansas River

Date collected:	10/5/60				
Laboratory:	RATSEC				
Time of collection:	--				
pH	8.0				
Specific Gravity, 20°C	1.0040				
Spec. cond. 25°C, micromhos/cm	21,000				
Total alkalinity ($CaCO_3$)	104				
Total hardness ($CaCO_3$)	920				
Dissolved solids*	13,400				
Calcium (Ca)	184				
Magnesium (Mg)	112				
Sodium (Na)	5,250				
Potassium (K)	13				
Sulfate (SO_4)	740				
Chloride (Cl)	8,050				
Iron (Fe)	0				
Silica (SiO_2)	--				
Boron (B)	0.7				
Fluoride (F)	0.6				
Iodine (I)	--				
Bromine (Br)	< 20				
Manganese (Mn)	0				

All chemical analyses expressed as mg/l, except pH and unless otherwise indicated.
*Determined at 103°C by SEC laboratory and at 180°C by USGS laboratory.

CHEMICAL ANALYSES OF NATURAL BRINE SOURCES

Area Location: Salt Spring, Prairie Dog Town Fork of Red River near Estelline, Texas
Area No.: V
Collection Point: Ground Water Sample near Spring
Basin: Red River
Tributary to: Red River

Date collected:	9/15/60				
Laboratory:	RATSEC				
Time of collection:	--				
pH	7.7				
Specific Gravity, 20°C	1.0378				
Spec. cond. 25°C, micromhos/cm	68,000				
Total alkalinity ($CaCO_3$)	128				
Total hardness ($CaCO_3$)	10,000				
Dissolved solids*	57,400				
Calcium (Ca)	1,600				
Magnesium (Mg)	1,460				
Sodium (Na)	18,800				
Potassium (K)	110				
Sulfate (SO_4)	4,500				
Chloride (Cl)	32,900				
Iron (Fe)	0				
Silica (SiO_2)	--				
Boron (B)	1.2				
Fluoride (F)	2.2				
Iodine (I)	--				
Bromine (Br)	< 20				
Manganese (Mn)	0				

All chemical analyses expressed as mg/l, except pH and unless otherwise indicated.
*Determined at 103°C by SEC laboratory and at 180°C by USGS laboratory.

CHEMICAL ANALYSES OF NATURAL BRINE SOURCES

Area Location: Salt Spring, Prairie Dog Town Fork of Red River near Estelline, Texas
Area No.: V
Collection Point: Overflow from Spring
Basin: Red River
Tributary to: Red River

Date collected:	4/25/60	8/5/60	9/15/60		
Laboratory:	RATSEC	RATSEC	RATSEC		
Time of collection:	--	--	--		
pH	7.4	7.9	7.7		
Specific Gravity, 20°C	1.0289	1.0317	1.0280		
Spec. cond. 25°C, micromhos/cm	63,000	60,000	58,000		
Total alkalinity ($CaCO_3$)	120	106	112		
Total hardness ($CaCO_3$)	5,600	5,600	6,000		
Dissolved solids*	50,900	48,000	44,400		
Calcium (Ca)	1,440	1,600	1,520		
Magnesium (Mg)	486	390	535		
Sodium (Na)	18,000	15,000	16,500		
Potassium (K)	110	100	60		
Sulfate (SO_4)	4,700	4,300	3,700		
Chloride (Cl)	25,250	25,500	25,700		
Iron (Fe)	0	0	0		
Silica (SiO_2)	13.4	12.4	--		
Boron (B)	1.9	2.0	2.0		
Fluoride (F)	2.5	2.9	1.4		
Iodine (I)	--	--	--		
Bromine (Br)	< 20	6	30		
Manganese (Mn)	0	0	0		

All chemical analyses expressed as mg/l, except pH and unless otherwise indicated.
*Determined at 103°C by SEC laboratory and at 180°C by USGS laboratory.

CHEMICAL ANALYSES OF NATURAL BRINE SOURCES

Area Location: Elm Fork of the North Fork of Red River
Area No.: VI
Collection Point: Salton Gulch
Basin: Red River
Tributary to: Red River

Date collected:	4/25/60	5/18/60	9/8/60	9/15/60	
Laboratory:	RATSEC	RATSEC	RATSEC	RATSEC	
Time of collection:	--	--	--	--	
pH	6.9	6.7	7.1	7.1	
Specific Gravity, 20°C	1.0950	1.1882	1.1897	1.1893	
Spec. cond. 25°C, micromhos/cm	155,000	220,000	190,000	190,000	
Total alkalinity ($CaCO_3$)	90	30	24	28	
Total hardness ($CaCO_3$)	9,200	13,200	13,600	13,200	
Dissolved solids*	157,000	310,400	304,000	303,300	
Calcium (Ca)	2,160	1,840	1,840	1,920	
Magnesium (Mg)	925	2,090	2,185	2,040	
Sodium (Na)	62,500	110,000	112,500	116,300	
Potassium (K)	230	560	340	340	
Sulfate (SO_4)	4,500	3,800	3,000	3,200	
Chloride (Cl)	86,500	181,000	184,000	182,000	
Iron (Fe)	0	0	0.10	0.10	
Silica (SiO_2)	9.2	3.0	--	--	
Boron (B)	2.5	2.2	2.5	3.0	
Fluoride (F)	4.0	3.2	3.3	2.8	
Iodine (I)	--	--	--	--	
Bromine (Br)	< 20	40	92	86	
Manganese (Mn)	0	0	--	--	

All chemical analyses expressed as mg/l, except pH and unless otherwise indicated.
*Determined at 103°C by SEC laboratory and at 180°C by USGS laboratory.

CHEMICAL ANALYSES OF NATURAL BRINE SOURCES

Area Location: Elm Fork of the North Fork of Red River
Area No.: VI
Collection Point: Kiser Gulch
Basin: Red River
Tributary to: Red River

Date collected:	5/18/60	9/8/60			
Laboratory:	RATSEC	RATSEC			
Time of collection:	--	--			
pH	6.8	7.2			
Specific Gravity, 20°C	1.1853	1.1935			
Spec. cond. 25°C, micromhos/cm	220,000	185,000			
Total alkalinity ($CaCO_3$)	50	40			
Total hardness ($CaCO_3$)	12,000	12,400			
Dissolved solids*	306,400	315,000			
Calcium (Ca)	2,080	1,600			
Magnesium (Mg)	1,650	2,040			
Sodium (Na)	110,000	118,800			
Potassium (K)	570	380			
Sulfate (SO_4)	4,000	3,200			
Chloride (Cl)	180,000	188,000			
Iron (Fe)	0	0.10			
Silica (SiO_2)	3.0	--			
Boron (B)	3.8	5.2			
Fluoride (F)	3.2	2.8			
Iodine (I)	--	--			
Bromine (Br)	48	200			
Manganese (Mn)	0	--			

All chemical analyses expressed as mg/l, except pH and unless otherwise indicated.
*Determined at 103°C by SEC laboratory and at 180°C by USGS laboratory.

CHEMICAL ANALYSES OF NATURAL BRINE SOURCES

Area Location: Elm Fork of the North Fork of Red River
Area No.: VI
Collection Point: Robinson Gulch
Basin: Red River
Tributary to: Red River

Date collected:	5/18/60	9/8/60			
Laboratory:	RATSEC	RATSEC			
Time of collection:	--	--			
pH	6.9	7.2			
Specific Gravity, 20°C	1.1911	1.1930			
Spec. cond. 25°C, micromhos/cm	225,000	190,000			
Total alkalinity ($CaCO_3$)	40	44			
Total hardness ($CaCO_3$)	14,000	12,800			
Dissolved solids*	314,200	308,900			
Calcium (Ca)	2,160	1,840			
Magnesium (Mg)	2,090	1,995			
Sodium (Na)	110,000	116,300			
Potassium (K)	550	340			
Sulfate (SO_4)	4,350	3,300			
Chloride (Cl)	186,000	185,000			
Iron (Fe)	0	0.10			
Silica (SiO_2)	3.8	--			
Boron (B)	3.6	4.2			
Fluoride (F)	2.5	3.3			
Iodine (I)	--	--			
Bromine (Br)	36	86			
Manganese (Mn)	0	0			

All chemical analyses expressed as mg/l, except pH and unless otherwise indicated.
*Determined at 103°C by SEC laboratory and at 180°C by USGS laboratory.

CHEMICAL ANALYSES OF NATURAL BRINE SOURCES

Area Location: Salt Creek of North Wichita River near Paducah, Texas
Area No.: VII
Collection Point: Spring #1, North Wichita River
Basin: Red River
Tributary to: Wichita River

Date collected:	8/31/60				
Laboratory:	RATSEC				
Time of collection:	--				
pH	7.9				
Specific Gravity, 20°C	0.9975				
Spec. cond. 25°C, micromhos/cm	2,100				
Total alkalinity ($CaCO_3$)	220				
Total hardness ($CaCO_3$)	572				
Dissolved solids*	1,510				
Calcium (Ca)	136				
Magnesium (Mg)	56				
Sodium (Na)	310				
Potassium (K)	4				
Sulfate (SO_4)	438				
Chloride (Cl)	380				
Iron (Fe)	0				
Silica (SiO_2)	--				
Boron (B)	0.6				
Fluoride (F)	0.6				
Iodine (I)	--				
Bromine (Br)	< 20				
Manganese (Mn)	0				

All chemical analyses expressed as mg/l, except pH and unless otherwise indicated.
*Determined at 103°C by SEC laboratory and at 180°C by USGS laboratory.

CHEMICAL ANALYSES OF NATURAL BRINE SOURCES

Area Location: Salt Creek of North Wichita River near Paducah, Texas
Area No.: VII
Collection Point: Spring #1 of Salt Creek of North Wichita River
Basin: Red River
Tributary to: Wichita River

Date collected:	8/4/60	9/14/60			
Laboratory:	RATSEC	RATSEC			
Time of collection:	--	--			
pH	7.6	7.9			
Specific Gravity, 20°C	1.0195	1.0215			
Spec. cond. 25°C, micromhos/cm	44,000	41,000			
Total alkalinity ($CaCO_3$)	102	104			
Total hardness ($CaCO_3$)	4,800	5,200			
Dissolved solids*	34,000	32,300			
Calcium (Ca)	1,200	1,280			
Magnesium (Mg)	440	485			
Sodium (Na)	10,000	11,600			
Potassium (K)	75	100			
Sulfate (SO_4)	3,700	3,600			
Chloride (Cl)	18,000	17,400			
Iron (Fe)	0	0			
Silica (SiO_2)	10.0	--			
Boron (B)	2.8	3.4			
Fluoride (F)	2.3	0.9			
Iodine (I)	--	--			
Bromine (Br)	6	100			
Manganese (Mn)	0	0			

All chemical analyses expressed as mg/l, except pH and unless otherwise indicated.
*Determined at 103°C by SEC laboratory and at 180°C by USGS laboratory.

CHEMICAL ANALYSES OF NATURAL BRINE SOURCES

Area Location: Salt Creek of North Wichita River near Paducah, Texas
Area No.: VII
Collection Point: Salt Plain on Salt Creek South of Spring #1
Basin: Red River
Tributary to: Wichita River

Date collected:	5/17/60	9/14/60			
Laboratory:	RATSEC	RATSEC			
Time of collection:	--	--			
pH	7.4	7.8			
Specific Gravity, 20°C	1.0189	1.0208			
Spec. cond. 25°C, micromhos/cm	46,000	40,000			
Total alkalinity ($CaCO_3$)	150	138			
Total hardness ($CaCO_3$)	4,800	6,000			
Dissolved solids*	34,100	34,900			
Calcium (Ca)	1,360	1,440			
Magnesium (Mg)	340	585			
Sodium (Na)	10,500	11,900			
Potassium (K)	70	50			
Sulfate (SO_4)	4,250	3,500			
Chloride (Cl)	16,500	18,200			
Iron (Fe)	0	0			
Silica (SiO_2)	14.2	--			
Boron (B)	1.2	3.9			
Fluoride (F)	3.2	1.8			
Iodine (I)	--	--			
Bromine (Br)	< 20	60			
Manganese (Mn)	0	0			

All chemical analyses expressed as mg/l, except pH and unless otherwise indicated.
*Determined at 103°C by SEC laboratory and at 180°C by USGS laboratory.

CHEMICAL ANALYSES OF NATURAL BRINE SOURCES

Area Location: Salt Creek of North Wichita River near Paducah, Texas
Area No.: VII
Collection Point: 300 feet above Spring #1 of Salt Creek
Basin: Red River
Tributary to: Wichita River

Date collected:	9/14/60				
Laboratory:	RATSEC				
Time of collection:	--				
pH	7.8				
Specific Gravity, 20°C	1.0169				
Spec. cond. 25°C, micromhos/cm	39,000				
Total alkalinity ($CaCO_3$)	48				
Total hardness ($CaCO_3$)	5,600				
Dissolved solids*	32,800				
Calcium (Ca)	1,280				
Magnesium (Mg)	585				
Sodium (Na)	10,500				
Potassium (K)	60				
Sulfate (SO_4)	3,300				
Chloride (Cl)	17,000				
Iron (Fe)	0				
Silica (SiO_2)	--				
Boron (B)	2.8				
Fluoride (F)	1.4				
Iodine (I)	--				
Bromine (Br)	40				
Manganese (Mn)	0				

All chemical analyses expressed as mg/l, except pH and unless otherwise indicated.
*Determined at 103°C by SEC laboratory and at 180°C by USGS laboratory.

CHEMICAL ANALYSES OF NATURAL BRINE SOURCES

Area Location: Salt Creek of North Wichita River near Paducah, Texas
Area No.: VII
Collection Point: Spring #2, Salt Creek of North Wichita River
Basin: Red River
Tributary to: Wichita River

Date collected:	8/31/60				
Laboratory:	RATSEC				
Time of collection:	--				
pH	8.0				
Specific Gravity, 20°C	0.9976				
Spec. cond. 25°C, micromhos/cm	2,000				
Total alkalinity ($CaCO_3$)	196				
Total hardness ($CaCO_3$)	664				
Dissolved solids*	1,530				
Calcium (Ca)	165				
Magnesium (Mg)	61				
Sodium (Na)	285				
Potassium (K)	4				
Sulfate (SO_4)	575				
Chloride (Cl)	315				
Iron (Fe)	0				
Silica (SiO_2)	--				
Boron (B)	0.4				
Fluoride (F)	0.6				
Iodine (I)	--				
Bromine (Br)	50				
Manganese (Mn)	0				

All chemical analyses expressed as mg/l, except pH and unless otherwise indicated.
*Determined at 103°C by SEC laboratory and at 180°C by USGS laboratory.

CHEMICAL ANALYSES OF NATURAL BRINE SOURCES

Area Location: Salt Creek of North Wichita River near Paducah, Texas
Area No.: VII
Collection Point: Spring #3, Salt Creek of North Wichita River
Basin: Red River
Tributary to: Wichita River

Date collected:	9/1/60				
Laboratory:	RATSEC				
Time of collection:	--				
pH	7.9				
Specific Gravity, 20°C	1.0013				
Spec. cond. 25°C, micromhos/cm	9,300				
Total alkalinity ($CaCO_3$)	132				
Total hardness ($CaCO_3$)	2,200				
Dissolved solids*	7,400				
Calcium (Ca)	640				
Magnesium (Mg)	145				
Sodium (Na)	1,750				
Potassium (K)	11				
Sulfate (SO_4)	1,770				
Chloride (Cl)	2,800				
Iron (Fe)	0				
Silica (SiO_2)	--				
Boron (B)	1.1				
Fluoride (F)	0.4				
Iodine (I)	--				
Bromine (Br)	20				
Manganese (Mn)	0				

All chemical analyses expressed as mg/l, except pH and unless otherwise indicated.
*Determined at 103°C by SEC laboratory and at 180°C by USGS laboratory.

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CHEMICAL ANALYSES OF NATURAL BRINE SOURCES

Area Location: Salt Creek of North Wichita River near Paducah, Texas
Area No.: VII
Collection Point: Spring #4, Salt Creek of North Wichita River
Basin: Red River
Tributary to: Wichita River

Date collected:	9/1/60				
Laboratory:	RATSEC				
Time of collection:	--				
pH	7.9				
Specific Gravity, 20°C	1.0052				
Spec. cond. 25°C, micromhos/cm	16,000				
Total alkalinity ($CaCO_3$)	132				
Total hardness ($CaCO_3$)	2,640				
Dissolved solids*	12,000				
Calcium (Ca)	752				
Magnesium (Mg)	185				
Sodium (Na)	3,450				
Potassium (K)	16				
Sulfate (SO_4)	2,225				
Chloride (Cl)	5,540				
Iron (Fe)	0				
Silica (SiO_2)	--				
Boron (B)	1.6				
Fluoride (F)	0.3				
Iodine (I)	--				
Bromine (Br)	50				
Manganese (Mn)	0				

All chemical analyses expressed as mg/l, except pH and unless otherwise indicated.
*Determined at 103°C by SEC laboratory and at 180°C by USGS laboratory.

CHEMICAL ANALYSES OF NATURAL BRINE SOURCES

Area Location: Salt Creek of North Wichita River near Paducah, Texas
Area No.: VII
Collection Point: Salt Creek, 2.5 miles above Confluence
Basin: Red River
Tributary to: Wichita River

Date collected:	5/17/60				
Laboratory:	RATSEC				
Time of collection:	--				
pH	7.1				
Specific Gravity, 20°C	1.0144				
Spec. cond. 25°C, micromhos/cm	35,000				
Total alkalinity ($CaCO_3$)	100				
Total hardness ($CaCO_3$)	4,400				
Dissolved solids*	27,500				
Calcium (Ca)	1,200				
Magnesium (Mg)	340				
Sodium (Na)	8,350				
Potassium (K)	60				
Sulfate (SO_4)	3,600				
Chloride (Cl)	12,500				
Iron (Fe)	0				
Silica (SiO_2)	1.4				
Boron (B)	--				
Fluoride (F)	3.2				
Iodine (I)	--				
Bromine (Br)	20				
Manganese (Mn)	0				

All chemical analyses expressed as mg/l, except pH and unless otherwise indicated.
*Determined at 103°C by SEC laboratory and at 180°C by USGS laboratory.

CHEMICAL ANALYSES OF NATURAL BRINE SOURCES

Area Location: Salt Creek of North Wichita River near Paducah, Texas
Area No.: VII
Collection Point: Salt Creek, 3 miles above Confluence
Basin: Red River
Tributary to: Wichita River

Date collected:	5/17/60				
Laboratory:	RATSEC				
Time of collection:	--				
pH	7.4				
Specific Gravity, 20°C	0.9987				
Spec. cond. 25°C, micromhos/cm	4,100				
Total alkalinity ($CaCO_3$)	200				
Total hardness ($CaCO_3$)	3,020				
Dissolved solids*	4,820				
Calcium (Ca)	728				
Magnesium (Mg)	290				
Sodium (Na)	140				
Potassium (K)	35				
Sulfate (SO_4)	2,700				
Chloride (Cl)	700				
Iron (Fe)	0				
Silica (SiO_2)	3.4				
Boron (B)	--				
Fluoride (F)	0.9				
Iodine (I)	--				
Bromine (Br)	< 20				
Manganese (Mn)	0				

All chemical analyses expressed as mg/l, except pH and unless otherwise indicated.
*Determined at 103°C by SEC laboratory and at 180°C by USGS laboratory.

CHEMICAL ANALYSES OF NATURAL BRINE SOURCES

Area Location: South Fork of the Wichita River near Guthrie, Texas
Area No.: VIII
Collection Point: Below Mouth of Ash Creek
Basin: Red River
Tributary to: Wichita River

Date collected:	5/16/60				
Laboratory:	RATSEC				
Time of collection:	--				
pH	7.2				
Specific Gravity, 20°C	1.0193				
Spec. cond. 25°C, micromhos/cm	44,000				
Total alkalinity ($CaCO_3$)	120				
Total hardness ($CaCO_3$)	4,800				
Dissolved solids*	35,200				
Calcium (Ca)	1,360				
Magnesium (Mg)	340				
Sodium (Na)	10,700				
Potassium (K)	90				
Sulfate (SO_4)	3,800				
Chloride (Cl)	17,000				
Iron (Fe)	0				
Silica (SiO_2)	8.8				
Boron (B)	3.1				
Fluoride (F)	1.5				
Iodine (I)	--				
Bromine (Br)	24				
Manganese (Mn)	--				

All chemical analyses expressed as mg/l, except pH and unless otherwise indicated.
*Determined at 103°C by SEC laboratory and at 180°C by USGS laboratory.

CHEMICAL ANALYSES OF NATURAL BRINE SOURCES

Area Location: South Fork of the Wichita River near Guthrie, Texas
Area No.: VIII
Collection Point: Humble Lease Road Crossing
Basin: Red River
Tributary to: Wichita River

Date collected:	9/14/60				
Laboratory:	RATSEC				
Time of collection:	--				
pH	7.9				
Specific Gravity, 20°C	1.0204				
Spec. cond. 25°C, micromhos/cm	40,000				
Total alkalinity ($CaCO_3$)	88				
Total hardness ($CaCO_3$)	4,000				
Dissolved solids*	29,500				
Calcium (Ca)	1,200				
Magnesium (Mg)	245				
Sodium (Na)	10,500				
Potassium (K)	60				
Sulfate (SO_4)	2,900				
Chloride (Cl)	15,800				
Iron (Fe)	0				
Silica (SiO_2)	--				
Boron (B)	3.4				
Fluoride (F)	1.4				
Iodine (I)	--				
Bromine (Br)	< 20				
Manganese (Mn)	0				

All chemical analyses expressed as mg/l, except pH and unless otherwise indicated.
*Determined at 103°C by SEC laboratory and at 180°C by USGS laboratory.

CHEMICAL ANALYSES OF NATURAL BRINE SOURCES

Area Location: South Fork of the Wichita River near Guthrie, Texas
Area No.: VIII
Collection Point: Spring #1 across River from Bateman Ranch Oil Well #1
Basin: Red River
Tributary to: Wichita River

Date collected:	5/16/60	9/7/60			
Laboratory:	RATSEC	RATSEC			
Time of collection:	--	--			
pH	7.4	7.8			
Specific Gravity, 20°C	1.0022	1.0184			
Spec. cond. 25°C, micromhos/cm	16,000	12,600			
Total alkalinity ($CaCO_3$)	130	120			
Total hardness ($CaCO_3$)	7,600	3,080			
Dissolved solids*	10,900	10,000			
Calcium (Ca)	1,600	864			
Magnesium (Mg)	875	225			
Sodium (Na)	2,550	2,380			
Potassium (K)	60	21			
Sulfate (SO_4)	2,750	2,325			
Chloride (Cl)	3,850	3,900			
Iron (Fe)	0	0			
Silica (SiO_2)	13.0	--			
Boron (B)	2.1	3.0			
Fluoride (F)	0.5	0.3			
Iodine (I)	--	--			
Bromine (Br)	< 20	30			
Manganese (Mn)	--	0			

All chemical analyses expressed as mg/l, except pH and unless otherwise indicated.
*Determined at 103°C by SEC laboratory and at 180°C by USGS laboratory.

CHEMICAL ANALYSES OF NATURAL BRINE SOURCES

Area Location: South Fork of the Wichita River near Guthrie, Texas
Area No.: VIII
Collection Point: Spring #2, South Fork of the Wichita River
Basin: Red River
Tributary to: Wichita River

Date collected:	9/7/60				
Laboratory:	RATSEC				
Time of collection:	--				
pH	8.0				
Specific Gravity, 20°C	1.0064				
Spec. cond. 25°C, micromhos/cm	16,000				
Total alkalinity ($CaCO_3$)	100				
Total hardness ($CaCO_3$)	3,280				
Dissolved solids*	12,600				
Calcium (Ca)	880				
Magnesium (Mg)	260				
Sodium (Na)	3,250				
Potassium (K)	23				
Sulfate (SO_4)	2,600				
Chloride (Cl)	5,280				
Iron (Fe)	0				
Silica (SiO_2)	--				
Boron (B)	3.9				
Fluoride (F)	0.3				
Iodine (I)	--				
Bromine (Br)	< 20				
Manganese (Mn)	0				

All chemical analyses expressed as mg/l, except pH and unless otherwise indicated.
*Determined at 103°C by SEC laboratory and at 180°C by USGS laboratory.

CHEMICAL ANALYSES OF NATURAL BRINE SOURCES

Area Location: South Fork of the Wichita River near Guthrie, Texas
Area No.: VIII
Collection Point: Spring #3, South Fork of the Wichita River
Basin: Red River
Tributary to: Wichita River

Date collected:	9/7/60				
Laboratory:	RATSEC				
Time of collection:	--				
pH	7.8				
Specific Gravity, 20°C	1.0030				
Spec. cond. 25°C, micromhos/cm	12,400				
Total alkalinity ($CaCO_3$)	148				
Total hardness ($CaCO_3$)	2,960				
Dissolved solids*	9,600				
Calcium (Ca)	816				
Magnesium (Mg)	225				
Sodium (Na)	2,250				
Potassium (K)	19				
Sulfate (SO_4)	2,325				
Chloride (Cl)	3,800				
Iron (Fe)	0				
Silica (SiO_2)	--				
Boron (B)	2.4				
Fluoride (F)	0.9				
Iodine (I)	--				
Bromine (Br)	40				
Manganese (Mn)	0				

All chemical analyses expressed as mg/l, except pH and unless otherwise indicated.
*Determined at 103°C by SEC laboratory and at 180°C by USGS laboratory.

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(Compiled by River Mile)

River Mile	Station	Monthly Summary of Continuous Recorded Flow & Quality Data (Pages)	Daily Flow & Continued Recorded Quality Data (Pages)
	ARKANSAS RIVER BASIN		
353.4	Arkansas River at Van Buren, Ark.	6	74-75
18.8	Canadian River near Whitefield, Okla.	7	76-77
6.9	North Canadian River near Eufaula, Okla.	8	78-79
85	Deep Fork River near Beggs, Okla.	9	80-81
5	Wewoka Creek near Wetumka, Okla.	10	82-83
84.4	North Canadian River near Wetumka, Okla.	11	84-85
261.2	near Oklahoma City, Okla.	12	86
281.0	near Oklahoma City, Okla.	13	87-88
93.9	Canadian River at Calvin, Oklahoma	14	89-90
24.1	Little River near Sasakwa, Okla.	15	91-92
6	Salt Creek of Little River near DeWright, Oklahoma	16	93
77.2	Little River near Tecumseh, Okla.	17	94
184.9	Canadian River at Purcell, Okla.	18	95
267.1	at Bridgeport, Okla.	19	96-97

River Mile	Station	Monthly Summary of Continuous Recorded Flow & Quality Data (Pages)	Daily Flow & Continued Recorded Quality Data (Pages)
	ARKANSAS RIVER BASIN (Continued)		
433.9	near Canadian, Texas	20	98-99
537.7	near Amarillo, Texas	21	100
668.5	at Logan, New Mexico	22	101
48.8	Verdigris River near Inola, Okla.	23	102-103
483.7	Arkansas River near Haskell, Okla.	24	104
523.7	at Tulsa, Okla.	25	105
17.7	Cimarron River at Mannford, Okla.	26	106-107
87.3	at Perkins, Okla.	27	108-109
121.8	at Guthrie, Okla.		
2	Salt Creek of Cimarron River near Okeene, Okla.	28	110
247.0	Cimarron River near Waynoka, Okla.	29	111-112
289	near Buffalo, Okla	30	113-114
	at Protection, Kansas	31	115-116
364.1	near Mocana, Okla.	32	117
594.0	Arkansas River at Ralston, Okla.	33	118-119
33.8	Salt Fork of Arkansas River at Tonkawa, Okla.	34	120-121
102.7	near Jet, Okla.	35	122-123

River Mile	Station	Monthly Summary of Continuous Recorded Flow & Quality Data (Pages)	Daily Flow & Continued Recorded Quality Data (Pages)
	ARKANSAS RIVER BASIN (Continued)		
22.2	Medicine Lodge River near Kiowa, Kansas	36	124-125
120.3	Salt Fork of Arkansas River near Ingersoll, Okla.	37	126
155	near Winchester, Okla.	38	127
24.3	Walnut River at Winfield, Kansas	39	128-129
701.4	Arkansas River at Arkansas City, Kansas	40	130-131
762.9	near Wichita, Kansas		132
15.6	Little Arkansas River at Valley Center, Kansas	41	133
800.3	Arkansas River near Hutchinson, Kansas	42	134-135
5.4	Rattlesnake Creek near Raymond, Kansas	43	136-137
873.2	Arkansas River at Great Bend, Kansas	44	138-139

INDEX FOR VOLUME III
(Compiled by River Mile)

River Mile	Station	Monthly Summary of Continuous Recorded Flow & Quality Data (Pages)	Daily Flow & Continued Recorded Quality Data (Pages)
	RED RIVER BASIN		
485.3	Red River at Index, Ark.	45	140-141
633.1	at Arthur City, Texas	46	142-143
24.1	Clear Boggy Creek near Caney, Okla.	47	144
725.9	Red River near Colbert, Okla.	48	145-146
63.4	Washita River near Durwood, Okla.	49	147-148
791.5	Red River near Gainesville, Texas	50	149-150
872	near Terral, Okla.	51	151-152
20	Little Wichita River near Henrietta, Texas	52	153-154
25.8	Beaver Creek near Waurika, Okla	53	155
55.3	Wichita River at Wichita Falls, Texas	54	156-157
8	Beaver Creek of Wichita River near Electra, Texas	55	158-159
126.4	Wichita River below Lake Kemp, Texas	56	160-161
133	near Seymour, Texas	57	162-163

River Mile	Station	Monthly Summary of Continuous Recorded Flow & Quality Data (Pages)	Daily Flow & Continued Recorded Quality Data (Pages)
	RED RIVER BASIN (Continued)		
34	South Fork of Wichita River near Benjamin, Texas	58	164-165
33	North Fork of Wichita River near Truscott, Texas	59	166-167
14	near Paducah, Texas	60	168-169
19.7	Cache Creek near Walters, Okla.	61	170
933	Red River near Burkburnett, Texas	62	171-172
10	Pease River near Vernon, Texas	63	173-174
73	near Childress, Texas	64	175-176
33	North Fork of Red River near Headrick, Okla.	65	177-178
48.5	Elm Fork of North Fork of Red River near Carl, Okla.	66	179-180
51	at Salton Crossing, Okla.	67	181-182
110.5	North Fork of Red River near Carter, Okla.	68	183
35.5	Salt Fork of Red River at Mangum, Okla.	69	184-185
	near Wellington, Okla.	70	186
1,030	Red River near Quanah, Texas	71	187-188
1,107	near Brice, Texas	72	189-190

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(Compiled by Station Number)

PHS Station Number	Station	Monthly Summary of Continuous Recorded Flow & Quality Data (Pages)	Daily Flow & Continuous Recorded Quality Data (Pages)
	ARKANSAS RIVER BASIN		
220	Arkansas River at Great Bend, Kansas	44	138-139
223	near Wichita, Kansas		132
224	Little Arkansas River at Valley Center, Kansas	41	133
227	Arkansas River at Arkansas City, Kansas	40	130-131
229	Walnut River at Winfield, Kansas	39	128-129
232	Medicine Lodge River near Kiowa, Kansas	36	124-125
235	Salt Fork of Arkansas River near Jet, Oklahoma	35	122-123
236	at Tonkawa, Oklahoma	34	120-121
238	Arkansas River at Ralston, Oklahoma	33	118-119
246	Cimarron River near Mocane, Oklahoma	32	117
248	near Waynoka, Oklahoma	29	111-112
253	at Perkins, Oklahoma	27	108-109
258	at Mannford, Oklahoma	26	106-107
259	Arkansas River near Haskell, Oklahoma	24	104

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PHS Station Number	Station	Monthly Summary of Continuous Recorded Flow & Quality Data (Pages)	Daily Flow & Continuous Recorded Quality Data (Pages)
	ARKANSAS RIVER BASIN (Continued)		
283	Verdigris River near Inola, Oklahoma	23	102-103
361	Canadian River at Logan, New Mexico	22	101
362	near Amarillo, Texas	21	100
363	near Canadian, Texas	20	98-99
364	at Bridgeport, Oklahoma	19	96-97
366	Little River near Tecumseh, Oklahoma	17	94
367	near Sasakwa, Oklahoma	15	91-92
368	Canadian River at Calvin, Oklahoma	14	89-90
387	North Canadian River near Oklahoma City, Oklahoma	12	86
388	near Wetumka, Oklahoma	11	84-85
390	Deep Fork River near Beggs, Oklahoma	9	80-81
392	Canadian River near Whitefield, Oklahoma	7	76-77
403	Arkansas River at Van Buren, Arkansas	6	74-75
760	near Hutchinson, Kansas	42	134-135
761	North Canadian River near Eufaula, Oklahoma	8	78-79
762	near Oklahoma City, Oklahoma	13	87-88

PHS Station Number	Station	Monthly Summary of Continuous Recorded Flow & Quality Data (Pages)	Daily Flow & Continuous Recorded Quality Data (Pages)
	ARKANSAS RIVER BASIN (Continued)		
763	Salt Creek of Little River near DeWright, Oklahoma	16	93
764	Salt Fork of Arkansas River near Winchester, Oklahoma	38	127
765	Wewoka Creek near Wetumka, Oklahoma	10	82-83
767	Rattlesnake Creek near Raymond, Kansas	43	136-137
769	Salt Creek of Cimarron River near Okeene, Oklahoma	28	110
770	Arkansas River near Haskell, Oklahoma	24	104
772	Salt Fork of Arkansas River near Ingersoll, Oklahoma	37	126
773	Cimarron River at Protection, Kansas	31	115-116
838	Canadian River at Purcell, Oklahoma	18	95
862	Cimarron River near Buffalo, Oklahoma	30	113-114

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(Compiled by Station Number)

PHS Station Number	Station	Monthly Summary of Continuous Recorded Flow & Quality Data (Pages)	Daily Flow & Continuous Recorded Quality Data (Pages)
	RED RIVER BASIN		
478	Red River near Brice, Texas	72	189-190
481	Salt Fork of Red River at Mangum, Oklahoma	69	184-185
483	North Fork of Red River near Carter, Oklahoma	68	183
490	near Headrick, Oklahoma	65	177-178
497	Red River near Burkburnett, Texas	62	171-172
500	Cache Creek near Walters, Oklahoma	61	170
503	Wichita River at Wichita Falls, Texas	54	156-157
507	Red River near Terral, Oklahoma	51	151-152
508	near Gainesville, Texas	50	149-150
520	Washita River near Durwood, Oklahoma	49	147-148
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